USAID
FROM THE AMERICAN PEOPLE

Energy
Security
Project

Newsletter

July
2021

www.energysecurityua.org

Facebook
LinkedIn
YouTube

Photo: martinlisner-stock.adobe.com

Photo: stock.adobe.com

CONTENT

Dean White: The Energy Security Project will continue to contribute to Ukraine's energy security

The USAID Energy Security Project has kicked off the fourth year of its implementation

- Electricity Sector
- Gas Sector
- Economy / Regulatory Sphere
- District Heating
- Gender Equality and Youth Support, Energy in the East
- Events, Grant Program

Comprehensive District Heating Modernization Program for Luhansk Oblast

Safe and Reliable Energy Supply in Luhansk Oblast

Electricity tariffs in Ukraine "could be much lower if auctions were used"

Program helping municipal stakeholders implement reforms aimed at technical optimization, higher economic efficiency, and the environmental safety of heat supply systems: Progress Tracker

Contributions from our Grantees

Open tenders

Vacancies

DEAN WHITE: The Energy Security Project will continue to contribute to Ukraine's energy security

The USAID Energy Security Project has passed its halfway point – three years have been successfully completed and an additional two years of work are ahead. USAID Energy Security Project's Chief of Party Dean White outlines how the Project will continue contributing to energy resilience and thus Ukraine's overall security. He explains how the Project proactively cooperates with the Ukrainian government, other diverse stakeholders as well as non-governmental organizations advance the role that Ukraine's energy sector plays in furthering independence and expanding access to regional markets.

The USAID Energy Security Project has passed its halfway point – three years have been completed and an additional two years of work are ahead. Time to summarize interim results.

We have managed to do quite a lot in these first 3 years, but much remains to be done due to the large scale of Ukraine's energy sector challenges. This is a large and complex energy system, so it is not surprising that the challenges are also complex. Fortunately, the USAID ESP is the largest USAID technical assistance project underway in Ukraine and it is multisectoral – we are involved with the electricity sector, including renewable energy, the gas sector, district heating, as well as working on environmental and social issues. We are also focused on professional training of young people and efforts to work with various institutions and ministries on gender equality.

What exact achievements or activities would you describe as key?

Concerning the power sector: it would be the competitive wholesale electricity market that was finally launched in 2019, including the design of a 'safe mode' to prevent abnormal profits at the early stages of the new market, and to give support to the development of key market actors, such as the Market Operator and Ukrenergo, among others, as well as supporting the NEURC on the various regulatory challenges that must be addressed during the transition from fully regulated to increasingly competitive markets. Additionally, we were able to support the establishment of the ancillary service market in 2020, to promote a modern and competitive approach towards securing the types of technical/operational support needed to ensure system reliability. We supported Ukrenergo in the move towards integration with the European energy system (commonly referred to as ENTSO-E integration) and are on track for synchronization with the European ENTSO-E system in 2023. On the regulatory front, we helped introduce the regulatory asset base (RAB) approach to DSO tariff setting to promote modernization through investment, thus helping to overcome a long legacy of inadequate investment in the utility networks.

I am also quite pleased with our success, in collaboration with Ukrhydroenergo and the World Bank on a unique energy storage project that will help to improve the technical operation not just of Ukrhydroenergo but through the deployment of large-scale battery storage. This innovative project, to be financed in large part through the World Bank, employs batteries in parallel with hydropower generation to optimize hydropower unit operation and provide the ancillary services to buttress the reliability of the energy system and ability to absorb effectively renewable energy resources.

In the gas sector: we have supported draft laws on the harmonization of the Ukrainian and EU gas markets. This included the adoption of the EU key functional standards on metering and quality. We supported the investment appraisal and preparation of a detailed ten-year Investment Need Assessment Program for the gas transmission system operator (GTSOU). Additionally, we analyzed the prospects of integration of the Ukrainian and Polish gas markets, supported gas quality issues, as well as a panoply of factors affecting the wholesale and retail gas markets.

In the district heating sector: the effort is both at the national level and in a dozen municipalities, in all cases focused on securing and stabilizing the heating sector. This includes recommendation on policy, a comprehensive package of regulatory recommendations and various supporting technical studies, especially around heat supply plans and defined investment projects. An important achievement of the Project is supporting CU Kyivteploenergo (KTE) since the start of the Project to help define an investment program for KTE to be financed at 140 million Euro by the EBRD. Additionally, we are supporting of the utilities with whom we partner to strengthen the company's technical and management capacities.

Additionally, there remains our ongoing efforts with civil society, youth, and various education institutions across a range of areas. In the past three years, ESP issued 24 grants to non-governmental organizations and media that are involved in a variety of awareness and educational activities. For instance, we strongly support the initiatives of our partners to encourage young people, and women to choose a professional career in the energy sector. The Project, in cooperation with the trade unions in the industry, developed the Code of Ethics and Gender Principles in the energy sector, conducted a series of training events for women working at NPC Ukrenergo and NEURC, and contributed to the establishment of Gender Committees at SC Market Operator and KTE. This effort is expected to expand to several ministries as well.

What are the ESP's priorities for the next period?

There are many but to focus on a few key ones, I would highlight - we are supporting aggressively the development of the competitive markets for electricity and natural gas through development of the energy trading platforms and market design. Additionally, we are promoting development of a first-time clearing and settlement system in Ukraine that is critical not just for the energy sector but can be used in the future to help to promote trading of various other commodities, such as agriculture.

Second, we have the effort on further integration of Ukraine with EU markets and institutions. This includes our support for ENTSO-E integration, as well as regulatory alignment, perhaps best demonstrated through our support for the introduction of the EU Regulation on Energy Market Integrity and Transparency (REMIT).

Third, we will keep our focus on the financial performance of the energy sector and the changes needed to market design, regulation, and government policy to ensure that the energy sector is able to be financially self-sustaining. I would note that in those market segments, say in electricity, in which progress has been made with new market design and regulation, we see the better financial performance. But in those legacy areas, such as non-payment by water utilities as one example, we see the financial debt still growing and becoming a drag on the overall system performance.

Fourth, we will continue to strive to attract financing to the sector. Our success so far has been to support almost $400 million in new investment through the World Bank and EBRD loan programs mentioned above. In all our work, we are pushing hard to design investment projects that can secure financing as it is the realization of the projects that achieve the results targeted.

Fifth, we will also continue to devote attention to the considerable challenges seen in the east of the country. We are working in the east to support the energy security for the east, whether that is designing a heating plan for the Luhansk region or supporting a local utility will badly needed equipment. The complicated issues in the east deserve a lot of focused attention.

Overall, ESP will keep doing its best to support the resilience of the Ukrainian energy sector and promoting at every stage the country's energy security.

The final decisions are up to the Ukrainian authorities, and evidence suggests that they are not always willing to follow advice from international consultants… Not all our recommendations are accepted by the executive bodies or the Cabinet of Ministers. For instance, we believed the cessation of the PSO mechanism for gas purchased by district heating companies was a premature measure. In general, we are in good, productive relations with the Ukrainian authorities. Indeed, the National Energy and Utilities Regulatory Commission, the government Regulator in the energy and utility sectors, is one of our major partners and we are in contact with them frequently. Our other key partners are the Ministry of Energy and the Ministry for Communities and Territories Development. It should be noted that our partners are not only the state authorities, though they are our main beneficiaries, of course.

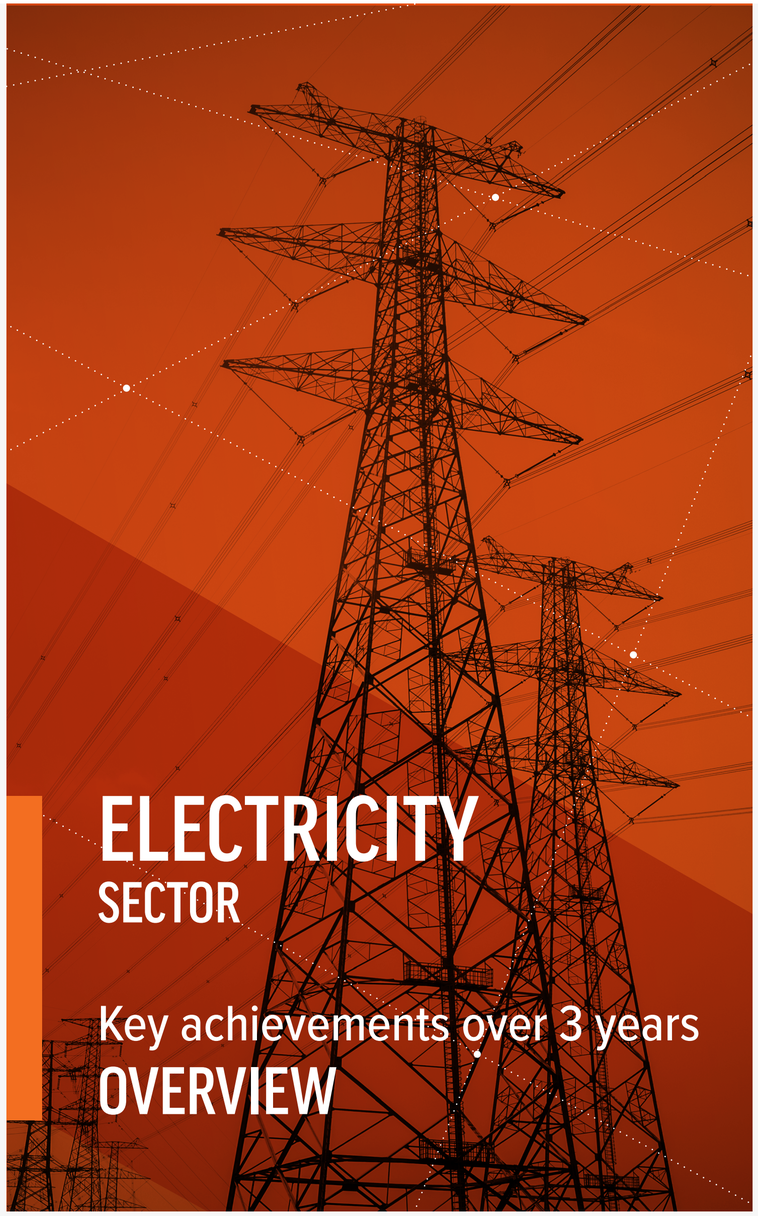
The Project contributes to energy education as well. A few examples: with the Project's methodological and material support (we provided laboratory equipment), the Ivano-Frankivsk National Technical University of Oil and Gas launched a 'Renewable Energy Engineering' Bachelor's Course. The Pre-Azov State Technical University developed a training course on energy security and energy independence. The Institute of Energetics, Automation and Energy Efficiency at the National University of Life and Environmental Sciences launched a modern testing and measuring laboratory. We understand that young people will shape the future of the Ukrainian energy sector and the country's energy security.

The USAID Energy Security Project has kicked off the fourth year of its implementation

Since 2018, we've managed to achieve a lot through working closely with the Government of Ukraine, the private sector and civil society to strengthen Ukraine's energy security, enhance the legal and regulatory environment, foster competitive energy markets, facilitate private sector-led investment, improve the integration of renewable power generation while we continue to strive to provide secure, reliable and affordable energy for all Ukrainians.

Project activities are centered on support for electricity, gas, district heating, renewable energy, as well as gender, youth and civil society support.

Highlighting key achievements in each of the Energy Security Project's activity sectors.



ELECTRICITY SECTOR

Key achievements over 3 years OVERVIEW

Facilitated the opening of Ukraine's wholesale electricity market in a safe mode to maintain financial sustainability.

Assisted Ukrenergo to develop an ancillary services market that strengthens the electricity system and advances integration with ENTSO-E.

Advised throughout the transition to a regulated asset base tariff model that will incentivize and attract private investment in the ongoing development of electricity distribution infrastructure.

Conducted electricity system modeling and tested Ukraine's electricity generation plants to ensure ENTSO-E integration and certification for the ancillary services market participants.

Initiated the development and introduction of an innovative solution for an energy storage system to increase efficiency at Ukrhydroenergo, unlocking $212M in World Bank funding.

GAS SECTOR

Key achievements over 3 years OVERVIEW

TSO modernization and EU integration

ESP continues to support the unbundled Ukrainian Gas TSO, focusing on modernization and strategic investment, including:

- 10 year investment need assessment
- Technical specifications for a modernized SCADA/EDM system
- Poland/Ukraine market, technical and regulatory integration study to prepare for EU market integration
- Technical experts to facilitate the adoption of key EU metering and quality functional standards in Ukraine.

Wholesale & Retail gas market development

ESP supported the development and opening of Ukraine's gas market in 2019 and continues to apply analytical and evidence based recommendations for improvement to the market. ESP provides technical support through studies, projects and grants in support of market development, including:

- A supplier market study to determine barriers and drivers for retail competition
- A communication campaign to raise awareness around consumers rights
- Exploration of enhancing liquidity through a gas release program
- Training for gas market participants

DSO Pilot Projects

Taking a sector wide and holistic approach, ESP acknowledges certain challenges across the value chain, including those within distribution. As such, ESP initiated a series of activities in optimizing distribution systems, outlining DSO losses and sources of losses, as well as validation and modelling of investment through the initiation of the DSO Pilot Project.

ECONOMIC / REGULATORY SPHERE

Key achievements over 3 years

OVERVIEW

Assesed the impact of CoVID-19 restrictions and developed sector-wide models and scenarios to mitigate negative impacts.

Modeling and scenario assessments of the renewable energy sector including debt analysis and suggested actions.

Developed a comprehensive financial model for the electricity market.

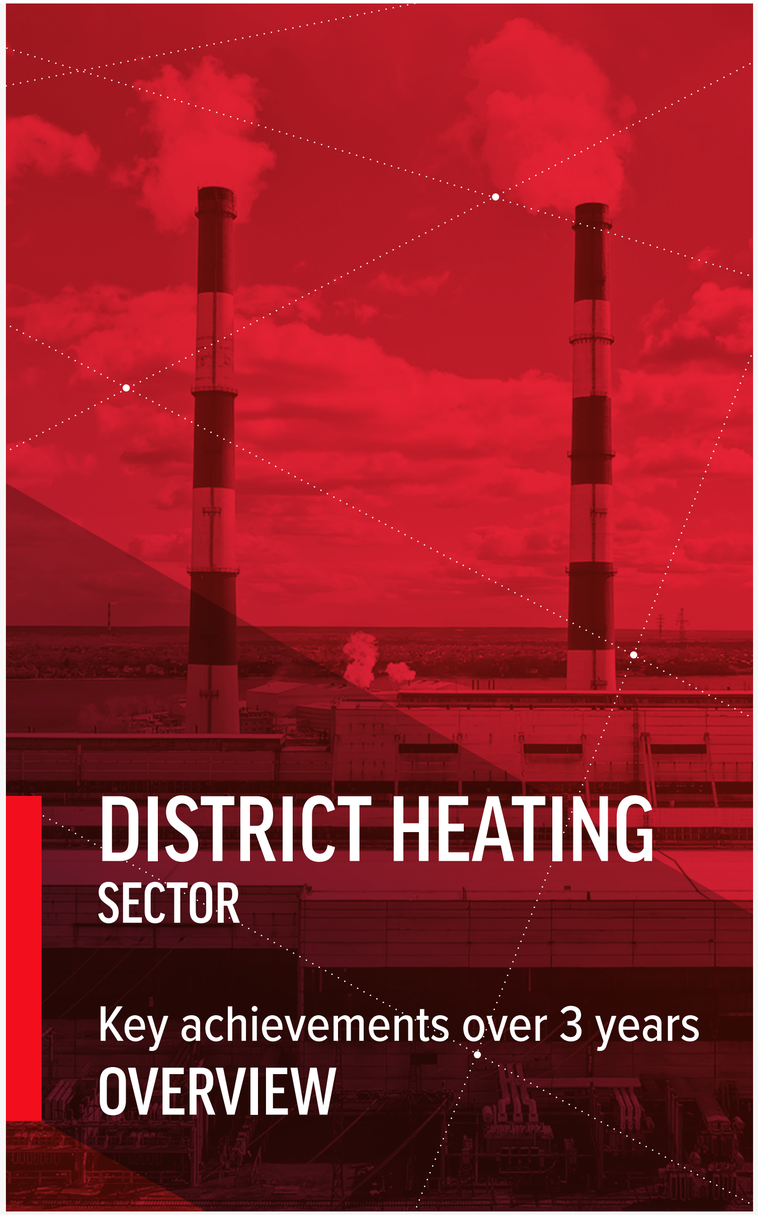
Support for the establishment of competitive markets and the introduction of derivative products to support a clearing system in Ukraine.

Developed the capacity of key energy market participants to adopt international financial reporting standards.

Optimization of the PSO mechanism and stabilization of energy system through the development of energy market financial models.

Successful transition to the implementation of e-DSO RAB tariffs allowing the opportunity for greater investment and financial planning.

Developed the capacity of key stakeholders to make Ukrainian energy market governance compliant with the integrity and transparency principles under EU REMIT.



DISTRICT HEATING SECTOR

Key achievements over 3 years OVERVIEW

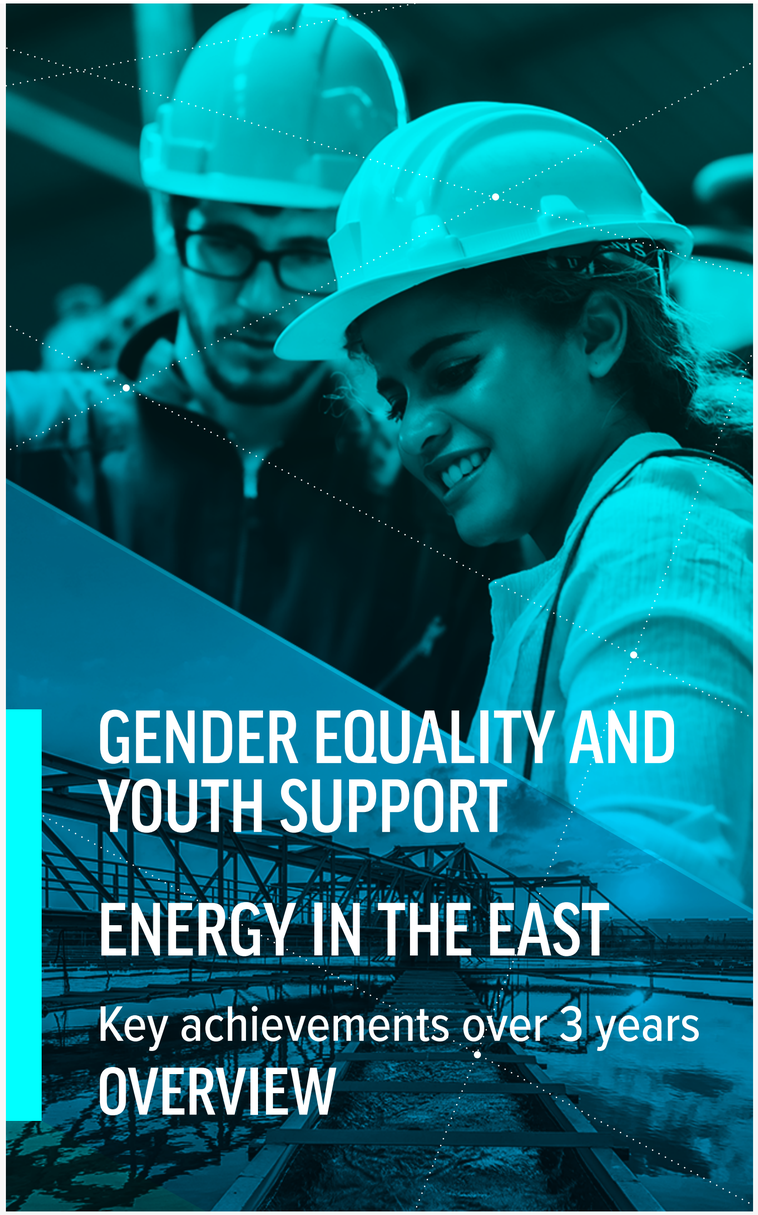
Supporting Kyivteploenergo (KTE) in obtaining the anticipated EBRD credit program, improving technical and governance capacity of KTE. This effort is expected to result in final EBRD loan approval within one month, leveraging about 140 million Euros for investments in KTE.

Strategic reform of the DH sector including a broad set of policy and regulatory recommendations to improve the sector performances.

Promotion of individual heating substations (HIS) on a mass scale including changing the manner in which DH utilities may support.

Addressing the challenges of removal of the PSO that covers gas purchases by DH utilities.

Enhancing long term DH planning for efficient, sustainable and affordable DH systems in municipalities: engaging 10 municipalities for heat supply scheme development and long-term investment programming.



GENDER EQUALITY AND YOUTH SUPPORT

ENERGY IN THE EAST

Key achievements over 3 years

OVERVIEW

Gender Equality and Youth Support

Empowering women working in energy through sets of trainings focused on several energy sector institutions such as Ukrenergo and the NEURC.

Developed a Code of Ethics for the Energy Sector of Ukraine in collaboration with the sector trade unions.

Launch of a new bachelor's Program on Renewable Energy Engineering launch at Ivano-Frankivsk National Technical University of Oil & Gas, provided laboratory equipment.

Curriculum development on Energy Security and Energy Independence at Pryazovskyj State Technical University.

ESP opened a modern measuring and testing electrical laboratory at the Institute of Energy, Automatization, and Energy Saving of the National University of the Life and Environmental Sciences of Ukraine.

Energy in the East

Analyzed the complicated situation with Voda Donbasu, the water utility serving both government and non-government controlled areas to identify ways in which to reduce the electricity usage and non-payment problem of this vital utility.

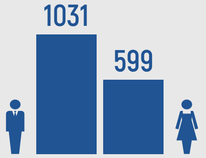
Supporting safety and reliable power supply in Luhansk oblast via on-going assistance to Luhansk Energy with diagnostic equipment, repair and safety related measures.

PUBLIC EVENTS GRANT PROGRAM

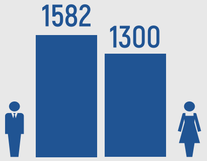
Key achievements over 3 years
OVERVIEW

We conducted:

18 events, attended by **1630** participants



34 training sessions for **2882** participants



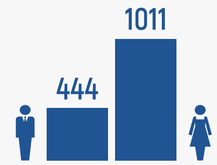
The grants program issued 11 calls for proposals, including one Annual Program Statement and 10 Requests for Applications - resulting in over 200 processed applications and 24 grants.

Our grantees:

trained **99** regional media

produced **23** articles, **200** news, **21** videos

conducted **37** training sessions for **1455** participants



Comprehensive District Heating Modernization Program for Luhansk Oblast

USAID Energy Security Project and Luhansk Oblast State Administration signed a Memorandum of Understating providing for a comprehensive program for modernization of the district heating system in the Oblast of Luhansk.

This modernization program will be based on a comprehensive assessment of the current state and development prospects of the heat supply systems in the Oblast, as well as the regional power and gas supply systems, potential energy sources, level of industrial development, energy efficiency interventions in the residential sector, and the program for socio-economic development in the region. This holistic approach follows the strategic approach currently applied in the European Union and elsewhere. This Program will become the framework for new schemes of heat supply to communities in Luhansk Oblast based on innovative methodologies.

The key outcome of this cooperation will be a gradual transition from traditional energy sources in the local heat supply industry to sustainable local sources, such as waste heat, biofuel, municipal solid waste, wastewaters, industrial waste fuels, and solar energy.

Read more.

Photo: romaset-stock.adobe.com

Safe and Reliable Energy Supply in Luhansk Oblast

USAID Energy Security Project and Luhansk Energy Association LLC signed a Memorandum of Understating providing for a safe and reliable supply of power in the Oblast of Luhansk, including to consumers residing in close proximity to the line of contact with the temporarily occupied territories of Ukraine.

According to the Memorandum, the Luhansk Energy Association LLC will receive international technical assistance in the form of 'measuring equipment and means of protection, pneumatically operated hand and automatic tools, instrumentation and metering devices, workwear and other equipment as required to ensure a safe and reliable power supply in Luhansk Oblast'.

It is expected that the technical assistance will contribute to energy security and supporting sustainable energy supply to consumers in East Ukraine which will contribute to the overall sustainability of the United Energy System of Ukraine, and its integration with the European Network of Transmission System Operators for Electricity of (ENTSO-E).

Read more.

Electricity tariffs in Ukraine "could be much lower if auctions were used"

Humankind puts much hope in renewable energy. This means renewable sources to replace fossil fuels, thermal power stations and nuclear plants. This is a strategy that most countries have already endorsed. Ukraine is planning to increase the share of renewable energy in the country's energy balance to 25% by 2035, as envisaged by the Energy Strategy of Ukraine. Here Allen Eisendrath, an expert from the USAID Energy Security Project, shares his vision of renewable energy, its prospects in Ukraine and the introduction of energy storage systems – an issue that is being widely debated in this context.

Read more.

Program helping municipal stakeholders implement reforms aimed at technical optimization, higher economic efficiency, and the environmental safety of heat supply systems: Progress Tracker

From now on, the Progress Tacker will make it easier to monitor the program implementation by the ESP and partner cities, letting us concentrate on the key outcomes.

Read more.

CONTRIBUTIONS FROM OUR GRANTEES

Careers in Energy are Cool!

This online course was presented by the non-governmental Center for Corporate and Social Responsibility.

The goal of this course is to change young people's perceptions of the energy sector and encourage them to choose energy professions.

The ten units of the course are about the origins of the energy industry, overall structure, some myths about the energy industry, innovations, educational institutions in the field, apprenticeship programs and major employers in the industry, career opportunities for women, energy security, and the UN Sustainable Development Goals.

For pictures from the Course presentation see here. For more about the Course see here.

Press awards about renewable energy media coverage

On 23rd July, the award ceremony presenting winners of a competition of regional journalists writing about renewable energy took place. The NGO Vinnytsia Press Club organized the competition as a part of the Initiative 'Educating Regional Journalists on Renewable Energy Sources' with support from USAID ESP.

The participants represented the Oblasts of Vinnytsia, Odesa, Mykolaiv and Kherson, as well as national, regional and local media.

The submitted materials covered a very wide range of topics and were presented in various formats – investigative journalism, reports from renewable energy facilities, awareness/educational materials on acute issues in the renewable energy sector, overviews of the Ukrainian and international experience in the field, as well as interviews on the current state and prospects of green energy in Ukraine and across the globe.

Read more.

Grants and Tenders

Please find more details here.

Vacancies

Detailed info about requirements and responsibilities – at our website.

This newsletter is made possible by the support of the American People through the United States Agency for International Development (USAID).
The contents of this document are the sole responsibility of Tetra Tech ES, Inc. and do not necessarily reflect the views of USAID or the United States Government.