BMZ
Promotion of Energy Efficiency and Implementation of the EU Energy Efficiency Directive in Ukraine
We rebuild Ukraine energy efficiently
The pillars for a sustainable and green future

Modern legislation
effective energy management system,
energy efficient renovation of buildings and green construction,
quality education in energy efficiency field
high competitiveness of industrial enterprises
### PROMOTION OF ENERGY EFFICIENCY AND IMPLEMENTATION OF THE EU ENERGY EFFICIENCY DIRECTIVE IN UKRAINE

<table>
<thead>
<tr>
<th>Duration</th>
<th>Objective</th>
<th>Budget</th>
<th>Partners</th>
</tr>
</thead>
</table>
| 5 years (July 2020 – June 2025) | Implementation of better framework conditions for energy efficiency | Total budget: EUR 18.15 million    | • Verkhovna Rada of Ukraine  
• Cabinet of Ministers of Ukraine  
• Ministry of Energy of Ukraine  
• Ministry of Education and Science of Ukraine  
• State Agency for Energy Efficiency and  
• Energy Saving of Ukraine |
|                |                                                                          | • German contribution: EUR 9.8 million;  
• Swiss contribution: EUR 5.15 million;  
• Budget increase 2022: 2+1.2 mln EUR |                       |                                                                 |
|                |                                                                          | **Components**                      |                                                                 |
|                |                                                                          | EE reforms / EE in municipalities / EE qualifications / EE in companies |                                                                 |
|                |                                                                          | **Beneficiary**                     |                                                                 |
|                |                                                                          | Ministry of Communities and Territories Development of Ukraine |                                                                 |
Challenges and our activities
Legal Challenges

• improvements in the field of increasing energy efficiency standards in construction and renovation measures
• “Green Vision” needed for further development of communities; national policies to support municipalities in developing their own strategies in regard to increasing energy efficiency and decreasing emissions.
• Need to implement EU EED and EPBD and to develop new standards for construction and modernization of buildings, including new NZEB standards, construction debris management
• legislation on urban planning considering energy efficiency and renewable standards, based on modern European spatial approach
• Need to develop feasible economic and financial mechanisms for stimulation of recovering projects with energy efficient and renewable elements for housing, public buildings and urban infrastructure (life support systems)
• design legal condition to improve urban mobility, inclusiveness, waste management (including the construction waste due to shells)
• Prioritize digitalization as an instrument to foster innovation
We boost energy efficient legislation
The legal, regulatory and institutional framework for increasing EE is strengthened in line with EU Directives 2012/27/EU on energy efficiency and 2010/31/EU on the energy performance of buildings.

10 Drafts for selected elements of EE-relevant EU requirements have been submitted to the decision-makers (e.g. laws, ordinances, statutes).

**Goal**

**Done**

**2020-2021**
1. EE Law
2. Setting of minimum energy performance requirements for buildings
3. Setting requirements to Nearly zero energy buildings (NZEB)

**2022**
5. Law on Thermo-modernization: adopted (09.07.2022)
6. The procedure for handling construction waste, processing and secondary use of construction waste from the war-related destruction of buildings that were formed as a result of armed aggression: adopted (27.09.2022)
7. Methodology for surveying buildings and structures damaged as a result of emergency situations, hostilities and acts of terrorism: adopted (06.08.2022)

**In progress 2022**
8. Certification of energy auditors (professional standard)
9. Construction of temporary housing for people who lost their homes as a result of military aggression
10. Mechanisms of application of national construction standards for construction products
5 Drafts of official legal acts of the public administration are submitted to decision-makers, aiming to increase the EE in the sense of relevant EU requirements, (e.g. funding mechanisms, budget and financial processes, mandate clarification, tender content, personnel qualifications)

Done

2020-2021

1. Certification of the energy performance of buildings
2. Methodology calculation EE in buildings
3. Energy management in buildings of budget institutions

2022

4. Energy Efficient public procurement:
Buildings and constructed assets. Service life planning. Part 5: Life-cycle costing:
adopted (11.07.2022)

In progress 2022

5. Exemplary role of governmental buildings in energy efficiency and renovation:
• National Database of buildings: to be connected to the Unified State System in sphere of Construction
• Draft Strategy Thermal Modernization: drafted, passed public hearings
• Draft Inventory list regulation of CEBs: being drafted
• Guides for project documentation for schools and kindergardens: four drafts under development
Gender in Energy Efficiency
Gender audit in the State Agency of Energy Efficiency.

EE JUMP project (2022-2023)
• network of journalists to be established, educational campaigns will be held to train specialists in topics of energy efficiency and energy saving sphere;
• architectural project for an energy-efficient ‘green’ school (demonstration projects).

EE Procurement project (2022-2023)
• raise awareness and strengthen capacity of stakeholders to conduct energy efficient public procurement through trainings, knowledge exchange and improvement of public procurement platform ProZorro.
• train and consult procurement specialists on issues of energy efficient public procurement using success stories and providing them with support through stages of public procurement.
• develop new digital instruments for monitoring and evaluating energy efficient public procurement and train stakeholders to use them.

Support Minregion on Promo campaign EE for winter season.
Reconstruction Challenges

• Destroyed residential/public buildings & urban infrastructure
• Municipalities in West and Central Ukraine have increased population due to IDPs, thus need to build new energy efficient buildings and develop sustainable urban infrastructure for increased purposes
• Municipalities need support in implementing and maintaining energy management
• Local communities need support in developing local sustainable development plans through integrated urban planning and spatial energy planning; should include development of municipal infrastructure like district heating, local decentralized renewable systems, transport and mobility issues, streetlight, planning of the development (reconstruction) of the residential sector, waste management
• Communities need support in EE building design
• Investment pipelines & developing fitting finance solutions as well as capacities to identify and raise funds need to be built
• Energy efficient and self-dependent shelters
We strengthen energy efficient municipalities

SUPPORTING MUNICIPALITIES IN THE FIELD OF ENERGY EFFICIENCY
1. Basic Municipal Energy Management (MEM)
   32 partner municipalities had significant progress and will finalize the MEM implementation after the war ends. Currently 25 partner municipalities continue active participation in webinars.

2. Strategic energy planning (MEP)
   1) The Methodology for spatial municipal energy planning has been developed.
   2) The Methodology will be presented to MinRegion and other partners, the practices will be distributed through webinars, seminars and workshops.

3. Municipal Investment measures for energy efficiency

4. Donor coordination and communication:

Goal

The legal, regulatory and institutional framework for increasing EE is strengthened in line with EU Directives 2012/27/EU on energy efficiency and 2010/31/EU on the energy performance of buildings

15 municipalities receive 100,000 euro each in 2022-2023 for EE and critical infrastructure support projects to implement demo energy efficiency projects and support critical infrastructure.
Progress on demo projects

<table>
<thead>
<tr>
<th>Project types</th>
<th>Project amount</th>
<th>Total costs, Euro</th>
<th>Energy savings, MWt/year</th>
<th>Decrease of CO2 emissions, tons CO2/year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complex thermal modernization of the building</td>
<td>5</td>
<td>1,339,000</td>
<td>1,248</td>
<td>383</td>
</tr>
<tr>
<td>Use of renewable technologies</td>
<td>6</td>
<td>625,000</td>
<td>2,236</td>
<td>4,109</td>
</tr>
<tr>
<td>Partial thermal modernization (mainly heating systems in insulated buildings)</td>
<td>3</td>
<td>317,000</td>
<td>390</td>
<td>114</td>
</tr>
<tr>
<td>Infrastructure projects (efficient water pumps, insulated tubes, special equipment)</td>
<td>3</td>
<td>249,000</td>
<td>797</td>
<td>642</td>
</tr>
</tbody>
</table>

Demo projects in the stage of signing the agreements with partners: 4
Demo projects in process of procurement already: 13

Projects realization plan

- 13 projects total cost 2,622 millions Euro
- 13 grants total sum 1,669 millions Euro
- 0,952 co-financing sum

Projects to be finalised – in 2023: 4
Projects to be finalized – in 2024: 5
More demo projects to be selected in 2023 and finalised in 2024: 5
Progress on MEM

- **3 partner cities** in occupied territory, **6 cities** on territory of intense hostilities. Energy managers, if possible, participate in online training and plan to develop MEM in cities after the liberation;

- September 2022: webinars on municipal energy management were resumed and the municipalities are able to complete level B;

- Despite difficult conditions of war, **25 partner municipalities (50 representatives)** took part in **6 online webinars** and are ready to continue their studies. In total **17 MEM webinars** since the beginning of FEER;

- November 2022: Webinars planned + information event on the restart of municipal energy management in the crisis conditions of war. The information event will be attended by partners and other communities that need advice on maintaining the energy system;

- Study on maintenance and repair of public buildings in the field of EE is being finalised. Recommendations and guidelines for municipalities will be provided in 2023;

- Model provisions are being developed together with MinRegion regarding the MEM based on FEER experience.
We encourage energy efficient companies

ENERGY EFFICIENCY IN COMPANIES
CURRENT ACTIVITIES

Advice to destroyed or damaged companies in Sumy and Chernihiv regions: damage assessment, technical analysis and recommendations on possibilities for energy efficient reconstruction and modernization of production facilities and processes.

Support to municipal utility companies: pilot energy audit for a water supply and sewerage company aiming at the measures reducing energy consumption and ensuring a secure and reliable water supply in the city.

Support for a dialogue process on energy efficient recovery of the national economy.

Ukrainian public and private companies are enabled to drive forward energy efficiency measures.
Education Challenges

- Educational institutions lost human capacities in different parts of Ukraine (due to relocation)
- Need to implement of energy efficiency construction and rehabilitation programs for vocational schools
- Need to form Education initiatives / university cooperations for energy management, renovation, urban planning
- Need to strengthen energy efficient Innovation Hubs to foster construction and reconstruction
We advance energy efficient skills

QUALIFICATION IN ENERGY EFFICIENCY
Professionals and students, including 20% women and girls, have access to extended qualification opportunities with energy efficiency relevance.

Preliminary Results

- 16 partner VET schools and 4 vocational centres of State Employment Centre (SEC) incorporated 4 developed curricula into their educational programs for students and adult trainees. MoUs signed with 15 more VET schools to implement EE related curricula;

- An academic course developed by the component “Supervision of construction works” has been included in the Master’s program in Construction and Engineering in 2 partnering Universities;

- 30 Promotion of VET and EE professions to women and girls through events: Energy Days, Job Fairs, Competition of Vocational Schools completed;

- ToT organized for teachers and masters of vocational training of 4 vocational SEC centers, 16 partner VET schools, and for lecturers of 9 technical universities in cooperation with the private sector;

- Training in 4 VET curricula started in 3 vocational training centres of SEC in cooperation with the private sector.

- The concept of the National Campaign for Promotion of Professions and Education in Energy Efficiency has been developed.

- 600+ students and professionals trained (about 300 during the war time), 15 online educational events conducted (trainings, methodological webinars, online internships).
Professionals and students, including 20% women and girls, have access to extended qualification opportunities with energy efficiency relevance.

**Goal**

Development of 3 new gender-sensitive curricula for further training in EE;

Capacity building trainings for Energy Innovative Hubs;

Network Extension: 45 VET schools as official partners and pilot implementation of curricula in them;

Training of 2 groups of professionals via Confederation of Construction Companies of Ukraine;

ToT and professional development events for teachers of VET schools;

Promotion events for professions and training courses in energy efficiency;

Development of 1 curriculum in Soft Skills for teachers and students of VET school.
Energy and climate cluster, GIZ Ukraine

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