

**Removing Barriers to increase
investment in Energy Efficiency in Public
Buildings in Ukraine through the ESCO
modality in Small and Medium Sized
Cities**

Duration: 2016 – 2021

Budget:



| | |
|----------------------------|-----------------------|
| Total resources required: | US\$ 62,153,195 |
| Total allocated resources: | US\$ 62,153,195 |
| Regular UNDP (cash): | US\$ 200,000 |
| UNDP (in-kind) | US\$ 700,000 |
| Other: | |
| GEF | US\$ 5,480,000 |
| Other Cash | US\$ 42,424,779 |
| In-kind | US\$ 13,348,416 |

Management Arrangements: NIM

Implementing Partner: MinRegion

The Development Objective:

To accelerate implementation of energy efficiency measures in public buildings in Ukraine through **the ESCO modality**, utilising **EPC contracts**, by leveraging over **significant private sector investment** over its five-year implementation period, including through the **launching of a financial support mechanism**, as well as by introducing a **single nationwide energy management information systems (EMIS)** for Ukraine.

The **10 pilot EPC energy savings projects** scheduled for implementation in **10 different municipalities in Ukraine** will save **2,346 MWh of thermal energy** and **268 MWh of electrical energy**. Moving forward, these 10 pilots will annually save 1,870 MWh of thermal energy and 166 MWh of electrical energy until the useful equipment life of 20 years, resulting in a total reduction of **8,893 tons of CO₂ over the 20-year equipment lifetime**. Indirect post-project emission reduction over the next 10 years after project completion are expected to be **1,440,000 tons of CO₂ avoided**, which translates into an abatement cost of **\$ 3.80 of GEF funds per tCO₂ reduced**.

| | Indicator | Baseline | End of Project Targets | Sources of Verification | Risks and Assumptions |
|---|---|--|--|--|--|
| Objective | | | | | |
| <p>To assist the Government in addressing the barriers to transform the market for investments in energy efficiency in public buildings in the country.</p> | <p>Emission reductions (in tCO₂ over 20-yr timeline).</p> <p>Investment in energy efficiency.</p> <p>Energy saved by capacity installed (MWh/MWh_{Th}).</p> <p>Number of green jobs created.</p> | <p>The building sector (housing, institutional/communal and commercial) consumes about 40% of total heat and 25% of all electricity in Ukraine making it a major contributor to greenhouse gas emissions.</p> <p>Energy consumption in existing buildings is on average approximately four times higher than that in Western European countries.</p> <p>No investment taking place to improve energy efficiency in existing buildings.</p> | <p>8,893 tons of CO₂ reduced over 20-year equipment lifetime.</p> <p>Indirect post-project GHG reduction of 1,440,000 tons of CO₂.</p> <p>Investment of \$ 21 million from ESCOs.</p> <p>3,000 green jobs created.</p> | <p>Project's annual reports, GHG monitoring and verification reports.</p> <p>Project mid-term review and terminal evaluation reports that provide a more accurate estimate of expected CO₂ reduction.</p> | <p>Continued commitment of project partners, including Government agencies and private stakeholders.</p> |

Component 1: To formulate and introduce a streamlined and comprehensive legal, regulatory and policy framework to promote energy efficiency in public buildings through strengthening of monitoring and enforcement mechanisms.

The main outputs:

- Support for the preparation of **Sustainable Energy Action Plans (SEAPs)** and signature of EU Covenant of Mayors
- Development and adoption of **secondary legislation** to support new law including financial incentives provided to ESCOs to invest in Energy Efficiency in public buildings such as income tax holiday for a specific period of time, duty and tax exemptions on equipment and services they provide.
- Regulations to support the development of **secondary market for EPC contracts** in order that the contracts can be sold to investors to provide for further liquidity and additional investment

Component 2: To promote private investment in energy efficiency in public buildings through appropriate catalytic financial incentives, including the establishment of a **Financial Support Mechanism (FSM)**. The FSM will be operated in partnership with IFC and be operated in the context of joint UNDP IFC cooperation on energy-efficiency. The financial support mechanism will build upon and expand upon the financial support mechanism being designed and developed under the UNDP GEF Commercializing Bioenergy Technologies in Ukraine project.

The main outputs:

- **Financial Support Mechanism (FSM)** established and capitalized to support private/ESCO investment in energy efficiency in buildings through guaranteeing payment to project developers/ESCOs for services provided.
- **Model Municipal EPC Procurement package** for launching EPC tenders
- **MOUs signed with banks** that are active in small and medium sized cities in Ukraine to use the financial support mechanism
- Capacity development of and support **to banks with standardized banking products** to support development of ESCO market using the EPC modality
- Capacity development of and **technical support to ESCOs**, including setting up of a **Help Desk**, to implement energy efficiency measures in public buildings using the EPC modality.

Component 3: To implement at least 10 pilot projects in selected public buildings **using the EPC modality** with companies selected by municipal EPC tender approach in order to demonstrate the energy and cost-saving potential of energy efficiency measures in different municipalities.

The innovativeness of these demo projects and what makes them different from other demonstration energy savings projects in buildings in Ukraine is that they will only be implemented using **a full ESCO approach whereby the ESCO designs, develops, finances, guarantees and monitors energy savings using a long term EPC signed directly between the ESCO and the municipality.** Other IFIs working in this space in Ukraine have been using a Quasi-ESCO approach whereby the IFI provides a municipal loan directly to the municipality and the ESCO then provides a guarantee of savings meaning that the ESCO itself is providing the technical solution and the guarantee of savings but not the financial solution. The full ESCO approach, that this project aims to adopt, is where the ESCO itself provides both a financial and technical solution to the municipality.

Component 4: To establish an institutional basis and comprehensive nationwide Energy Management and Information System (one single energy management system adopted for public buildings in Ukraine). The EMIS will be closely linked to the national database of energy consumption in public buildings in Ukraine.

The main outputs:

- An approved mandatory **National Energy Audit Program** for promoting larger number of energy audits of public buildings with approved budget.
- **Agreed methodology and sustainable institutional arrangements for annual monitoring of energy efficiency** in public buildings through implementation of a nation-wide Energy Management and Information System.
- **A database of public buildings re. energy consumption established** and an energy monitoring and information management system put in place for public buildings in the country.
- **Published materials** advocating the benefits of energy efficiency measures in public buildings, and **project website** designed and regularly updated. The website will serve as a **vehicle for “better information for better decisions”** regarding energy performance and show how energy efficiency can result in lower energy bills.