

Ukraine: District Heating Energy Efficiency Project **(US\$382 mln = US\$ 332 mln IBRD + US\$ 50 mln CTF)**

Introduction

In 2012, the Bank published a report entitled “*Modernization of the District Heating Systems in Ukraine: Heat Metering and Consumption-Based Billing*,” which outlined a multi-step reform program. It recommended making consumption-based billing for heat obligatory and installing building-level heat meters with temperature controls in all buildings that use district heating (DH), together with temperature controls at building-level individual heat substations (IHSs), along with targeted social assistance for low-income households. The study also emphasized that DH tariffs should cover the full cost of gas and investments necessary to modernize systems, while reducing heat consumption by about 50 percent through investments in energy efficiency. In 2012, the Government of Ukraine (GoU) approved a master plan to improve energy efficiency in the DH sector based on this report. However, its implementation remains slow. In order to speed-up implementation of the action plan, GoU requested the Bank to prepare a project to improve efficiency of the selected DH utilities in line with the recommendations of the report.

Project’s objectives and benefits

The proposed US\$382 million project will improve the energy efficiency and quality of service of selected Ukrainian DH companies, improve their financial viability and decrease their CO₂ emissions.

Because the needs of the Ukrainian DH sector are huge, the project is intended as demonstrational pilot that would show benefits of improved efficiency and consumption-based billing. The project supports 10 DH companies that cover about 30% of the Ukrainian heat market and includes two of three biggest DH systems in Ukraine (Kharkiv and Donetsk); it is expected to stimulate other municipalities and DH companies to start investing in similar projects.

The project will directly benefit many ordinary Ukrainians. It would improve efficiency, reliability and quality of service of selected DH companies. Improving energy efficiency would potentially decrease costs of the selected DH companies in the medium-term, thus reducing pressure of tariff increases. Since the project would improve the quality of the services, it would help reduce social tension in the long run. Because of installation of building-level heat substations and building-level heat meters, the transparency and governance of the sector would improve. Moreover, promoting consumption-based billing, the project would provide incentives to households to improve their energy efficiency.

Project’s design

The project is technically simple. Its design is similar to the activities the Bank has successfully implemented in the region over the past 20 years.

The project design incorporates lessons learned during implementation of infrastructure investment projects in Ukraine. Specifically, the project will be implemented locally, in 10 carefully selected DH companies. The participating DH companies and municipalities were selected competitively based on governance indicators and financial indicators. Governance

indicators included: availability of boiler-level gas and heat meters; prevalence of residential consumption-based billing;¹ and availability of individual heat substations and/or readiness to install individual heat substations. Financial indicators included: the cost-recovery level of heating tariffs, ratio of revenues to costs (at least 0.7) and the collection rate.

Addressing risks

- **Country risks:** The project design minimizes country-specific risks. First, because of the local level of implementation, the project would not be directly impacted by the political situation in Kiev. Second, the project by itself is not enough to push tariff reforms forward-- in order to facilitate the necessary energy pricing reforms, the Bank jointly with the IMF and other donors is having an ongoing policy dialogue with GoU. However, the project would create conducive environment for tariff increases in 10 municipalities. It would be an important step in moving forward heating tariff reform in medium-term.
- **Financial viability:** The average cost recovery of the selected utilities is 70 percent (compared to 60 percent average in Ukraine). The design of the project includes measures that would allow the participating DH companies improving their financial viability over the life of the project. The project legal agreements will include a so-called "break-even covenant" that requires participating companies to generate revenues equal or higher than their operating costs (including debt service) within 3 years after the project commencement. If the covenant is not fulfilled, the Bank would have an option to suspend the project.
- **Governance:** Because of the selection process design, participating district heating companies have better governance and transparency structures. Also, they are among the companies that are closest to financial cost recovery. All selected DH companies have 100 percent gas meters on their boiler houses, and almost all of their boiler houses have boiler-level heat meters. Those boiler houses that do not have meters are expected to get them by the end of the 2013-2014 heating season. Most commercial consumers of the participating companies are metered. Each participating company already bills a share of its residential consumption according to building-level heat meters (25-85%).
- **Commitment:** The participating companies and municipalities have demonstrated high level of commitment to the project. In order to ensure increased transparency of billing, each participating company will install building-level heat meters as a part of their investment programs financed by the project. The participating companies have already established project implementation arrangements; all the necessary documents have been disclosed and the process of public consultations of those is ongoing. The companies participate in the training on the Bank procedures and have been extremely cooperative during the preparation of the feasibility studies.

Coordination with other Bank's activities in the sector

The project is a crucial part of the Bank's comprehensive sector strategy to address major challenges in the DH sector and is a vehicle to continue the policy dialogue, including on DH tariffs. In coordination with the IMF, the Bank developed a suggested path for energy price

¹ Share of residential heat consumption, which is billed according to readings of building-level meters.

reforms in Ukraine, along with impact mitigation. The proposed reforms include a short-term increase in DH tariffs to financial cost-recovery levels and gradual increases in gas prices to DH utilities (with corresponding heating tariff increases) over the subsequent four years. In consultation with the EC, EIB, EBRD, USAID, and SIDA, the Bank designed technical assistance to the Utilities Regulator to support its long-term sector reform strategy of improving financial viability of the DH sector; the activity is supported by SIDA-WB trust fund. These steps should be implemented with a reform of social safety nets to improve targeting and an aggressive energy efficiency program to reduce residential heat consumption. The World Bank is helping the Government to start reforming its social assistance programs through its Social Safety Nets Modernization Project currently under preparation.

Coordination with other donors active in the sector

The Bank and the other donors (IMF, USAID, EBRD, EIB) are in agreement on priority reforms in the Ukrainian DH sector. The project team has been consistently coordinating its work with other donor activities in the sector (e.g., by USAID, Swiss Agency for Development and Cooperation /SDC/), including similar projects that are co-financed by the Eastern European Energy Efficiency and Environment Partnership (E5P) funds (e.g., by EBRD, NEFCO, EIB). Out of 10 selected DH utilities, 7 have not worked with any other donor before. Only one selected utility (in Donetsk) is expected to benefit from E5P fund (as a part of EBRD-NEFCO project); the work in Donetsk has been coordinated with EBRD. Another selected utility (in Ivano-Frankivsk) has been working with EBRD since 2009; the project would complement EBRD-financed investments. Another company (in Vinnytsia) has been working with SDC; the SDC project is expected to close in Spring 2014. SDC consultants were involved during the preparation of the feasibility studies for the company in order to avoid duplication of work and build up on work completed and experience gained.

The project team is working closely with USAID who has expressed interest to assist the participating DH companies with preparation of the technical specifications and bidding documents as a part of their ongoing project. The Bank is currently discussing the extent of parallel implementation support with USAID to enhance the implementation of the project.

As it has been mentioned above, in coordination with the IMF, the Bank developed a suggested path for energy price reforms in Ukraine, along with impact mitigation. The Bank has set up a SIDA-WB trust fund for technical assistance to the Utilities Regulator to help it transition from “cost+” to incentive-based regulation; this task is expected to commence in early 2014.