

**Review of European Bank for Reconstruction and Development (EBRD) Clean Technology Fund (CTF)**

**Private Sector Proposal:**

**Ukraine District Heating Modernisation Program**

1. I have reviewed the EBRD CTF private sector proposal for the Ukraine District Heating Modernisation Program. On the basis of this review, **I strongly support and endorse this CTF proposal for the reasons summarised below.**  
The background of the DH sector in Ukraine is presented in an excellent and precise way in the Program Approval Request as well as the recent Review of World Bank CTF Public Sector Proposal: Ukraine District Heating Energy Efficiency Project, Dec 2013. There is no need for replication.
2. **The Program builds on the EBRD's extensive investment and market development experience** in the field of medium- to large-scale sustainable energy financing in Ukraine. The present Program proposal of distinguished detail and maturity will adapt this experience. It builds on the long, extensive and stony track of EBRD and other contributors in (i) the succeeding policy dialogue with the GoU to improve the regulatory framework to enable investments in the DH sector; (ii) identifying clients who can undertake loan obligations; (iii) valuable analysis and preparation of the feasibility of promising projects of scalable size and potential and finally (iv) assembling a financing structure comprising commercial and concessional loans as well as a grant component to overcome the barriers of financing DH modernisation.
3. **The Program is fully in line with the CTF objectives and guidelines** in light of a combination of factors, including: (i) the potential for large-scale GHG emission reductions; (ii) the cost-effectiveness of GHG emission reductions; (iii) the presence of additional costs or risks associated with the GHG emission reduction investment that affect its financial viability; (iv) demonstration potential, including scope for replication of results on a wider scale; (v) institutional and market transformation potential; (vi) development impact, and (vii) implementation potential in the country. The Program can satisfy the above set of criteria in Ukraine and can also meet the purposes of the CTF Investment Plan.
4. **The Program is an important element of financial support to achieve the country's energy policy objectives.** The project is part of Ukraine's strategy commitment to reduce energy intensity by 50% by 2020. The *Energy Strategy of Ukraine for the Period till 2030*, updated in 2012, addresses challenges and sets objectives in the energy sector, such as (i) developing an integrated and effective regulatory framework; (ii) increased development of domestic energy resources; (iii) measures to drive energy efficiency; (iv) cost-reflective pricing; and (v) improved conditions to attract private investment. The proposed Program supports these objectives.  
The above strategy is a step in the right direction, but it is still dominated by supply-side policies. More emphasis on efficiency and demand-side measures should be given, where the potential savings are large and could be achieved at relatively low cost. EBRD's initiatives on EPC piloting in Ukraine address demand-side measures as an element of the Integrated Approach for DH sector restructuring.
5. **Huge challenges exist for municipal district heat supply.** These can be expressed in an oversimplified scenario of (i) increasing costs for energy services and emissions due to worn out infrastructure; (ii) raising expectations of the population about quality of supply services and good and efficient governance, *leading* to (iii) demand for investments *versus* facing (iv) limited profitability of projects under commercial terms under current conditions; (v) low financial

capacities of the DHC; (vi) a confining regulatory framework for investment and tariff setting; and (vii) no availability of alternative commercial or public financing sources.

This makes the proposed Program a unique and almost exclusive instrument in Ukraine to bridge the financing gap combined with technical assistance to develop the capacities for the implementation of urgently needed modernisation. The use of concessional finance does not therefore cause any market distortion.

Low or below-market energy prices have two consequences: (i) they do not encourage consumers to invest in energy efficiency; and (ii) low prices fail to provide enough revenue for heat supply companies to repair and modernize their systems.

**6. The existing legal and regulatory framework for tariff-setting is multi-layered and complicated.**

Ukraine is actively developing and refining the methodology used to set tariffs in the regulated sectors. There has been some effort to move towards common international practice, nevertheless, the existing regulatory environment risks are substantial and tariff increases remain a politically sensitive matter, especially given the upcoming (2015) presidential elections.

The transfer of tariff-setting responsibilities to the newly established regulator NCRCS has resulted in a period of instability and delay of tariff approvals with no consideration for the investment programmes. The unpredictability of the regulatory body's decisions and its capacity constraints restrict the possibilities to revise the determined heat tariffs.

There is no conformity between various legal provisions and definitions, which at present creates a significant regulatory risk for the regulated companies. That risk is amplified by the following aspects: (i) the regulatory review of tariff revision looks only one year ahead, which does not encourage the planning and implementation of multi-year investment programmes; (ii) the unpredictability of the regulator's decisions the more often a tariff review takes place; (iii) there is no automatic indexation of tariffs between reviews, which is critical in terms of consideration of real (constant price) tariffs vs. inflation; (iv) for operating costs there are fixed maximums (norms) set for some of the values (e.g. losses), regardless of what a reasonably efficient company would be capable of in the short or medium term; (v) regulatory depreciation is based on tax rules, which can change unpredictably for reasons of tax policy and practice but these are not designed for purposes of economic regulation; (vi) there are no explicit rules for determining the allowable share of capital costs for the return on equity, which creates considerable uncertainty for private sector companies and not least (vii) the still insufficient human resource capacities of the NCRCS to perform the complex tasks.

The tactic of the NCRCS so far in adopting new tariff-setting and approving reviews was to find a way to set justifiable limits for investments and for tariffs overall, so that the tariffs remain affordable for the majority of the population. It is expected that the new GoU will enable a turnaround of regulatory attitude and practice towards sustainable market rules. In contrast to this opportunity there remains weak economic growth and (i) shortage of public finances which pose a risk for the affordability of loans and the subsidy transfers to the DHC to fill the financial gap, as well as (ii) affordability of adapted, higher tariffs by end consumers.

A challenge is the securing of funds for repayment of investments despite the provisions of the regulatory commission. Common practice in Ukraine for preparing an investment programme by the utility involves defining investment needs for the year ahead, with a breakdown by individual project, and a matching of needs with sources of financing. The respective regulation of NCRCS specifies the need for the regulated company to describe in detail the types of investments, depreciation, so-called "production investment from profit", borrowed funds, state subsidies and other financing. Cash flow generated by the depreciation allowance is not permitted to be returned to investors because according to the laws on

leasing and concession, private operators are obligated to reinvest funds in municipal infrastructure equivalent of the amount of depreciation. Thus, depreciation cannot function as a return of lenders' or shareholders' investments. So the only source of funds that can be used for repayment of investments (including debt principal provided by lenders) is the profit component negotiated with the regulator.

7. **The EBRD's Integrated Approach to the Ukraine District Heating Sector combining investment, technical assistance and policy dialogue has the potential to raise synergies** between the different types of presented projects, local initiatives and the regulatory structure. There is a justified expectation that through the critical mass and volume of investment projects of the Program the call for urgent regulatory rationalisation will be heard by decision makers in the new GoU to make active use of the assistance offered which will result in a real transitional impact in the DH sector.
8. **The Program will have a strong multi-level development impact** (i) at macro-economic level through the development of a self-sustainable DH sector reducing distortion and demand for budget subsidies, creating a conducive regulatory environment and reducing dependency on fuel imports; (ii) at local economic level by transforming the DHC to cost-covering, profit-making and competitive service suppliers; and (iii) at labour level by building capacities, securing long-term employment in a sustainable municipal service sector and creating jobs during construction. In addition, the Programme will have a positive impact (i) on the environment by reducing GHG emissions on a national scale as well as inner-urban emissions; (ii) at social level by enabling affordability of least-cost heating and avoiding socio-economic unrest; (iii) at end consumer side by increasing the quality of heating service, levels of comfort in apartments and awareness-raising of the benefits of resource saving. To summarise, the expected impact is the creation of a cleaner, more attractive and sustainable urban environment.
9. **The Program will have a significant demonstration effect** by increasing the reliability and efficiency of central heat supply, which is the main source of affordable heating for the majority of the population in larger cities. The 10 projects considered benefit up to 12% of Ukraine's population. Under the current political circumstances it is important that the international donor community underlines the commitments in supporting the economic development of a pro-European society in Ukraine.
10. **From the technical perspective the DH modernisation projects in the selected cities are feasible.** Assessments are available or under preparation for most of the projects, (i) guiding the technical implementation concept; (ii) specifying the investment plan and (iii) quantifying the energy and GHG emission saving potential. The component on installation of new, compact Individual Heating Substations (IHS) is an important element in significantly reducing the heat demand of buildings and enabling end consumers - due to metering and consumption-based billing - to financially benefit from energy saving measures, which in turn will increase the affordability of higher tariffs. Technical components for increasing the efficiency of DH systems and the use of renewable energies (where available), such as biomass CHP and landfill gas will contribute towards decreasing the use of fossil fuels, thus supporting the objectives of the Energy Strategy and reducing the need for Russian gas imports.
11. **The demand to alleviate risks through additional cost of advanced project components** (i) at demand-side technology (IHS); (ii) promotion of high-efficiency co-generation (CHP) and (iii) use of locally available RE sources, systematically concerted with policy dialogue and technical assistance components **are addressed by concessional and grant funds by CTF/E5P.** Thus, the Program including CTF co-finance will generate added value for the benefit of DHC, end consumers and the regulatory structure according to actual demand.

However, reducing the risk of non-servicing of the loans by grant allocations in high risk environments may be a very blunt instrument indeed and very costly to the donor funds. The E5P has already gone quite far in Ukraine in allocating grants up to a level of 1:2 in relation to the loans. By doing so they will increase the affordability of the project for the municipalities and create incentives for them to undertake the projects. Increasing the affordability of the project will of course eliminate only one reason for the non-servicing of the loan.

The current and up-coming political changes will have an effect on the entire economy including the financing sector and the stability of the Ukrainian Hryvnia. Hence, there is an increasing risk for the economic viability of the projects as imported equipment components of the investment plan become more expensive while the while the revenue source of the DHC remains constantly low as it depends on the local currency.

12. Increasing heating tariffs to cost-covering level during the current political situation bear the risk of public unrest. **The elements of the risk mitigation strategy outlined in the Program Approval Request (PAR) on accompanying communication strategies gain more multi-level significance among the** (i) new GoU, including the regulatory body; (ii) Mayor and the City Council; (iii) DH companies and (iv) DH customers to address the needs and demonstrate the benefits of investments and tariff reforms to steer the projects under the Program to success.

An important factor will be to convince (i) the regulator that the combined impact of lower cost of district heating supply and higher opportunities for reduced heat consumption will make residents better off financially and (ii) the local decision makers, including the managers of DH companies that both investment in DH network efficiency and demand side EE measures will improve the financial situation of the DHC in the long run.

13. **Accompanying Technical Assistance is a crucial element in building and strengthening capacities for the development and successful implementation of DH projects.** It is a consistent approach of the Implementing Agencies to E5P, seeking to provide assistance to the NCRCS through the regulatory Reform Support Programme with the objective of (i) developing transitional methodologies, accounting reforms and auditing principles in order to improve the capacities for setting cost-covering tariffs, issuing and controlling licenses, etc. enabling competition between fuels and heat deliveries and long-term efficiency; (ii) introducing a sector-wide benchmarking model; and more generally (iii) incentivising broader reforms of DH operators with the ultimate goal of transforming them from social service providers into companies that seek to cover costs and generate profit, focus and deliver cost-effective and competitive services.

14. Taken together, the Program's **combination of financing sources, the policy dialogue and technical assistance components** as well as the EBRD's strong EE financing execution capacities, expertise and track record all constitute a recipe for success. However, adapted policy dialogue strategies are crucial elements in mitigating the substantial risks. It is hoped that an improved enabling environment and extended access to appropriate finance with concessional components will allow Ukraine to develop a sustainable DH sector achieving the objectives of the Energy Strategy.

Respectfully submitted,

**Consultant's name**

Rainer Behnke

## **Sources of information for the review:**

- (1) CTF Program Approval Request, Ukraine District Heating Modernisation Program;
- (2) Ukrainian Energy Strategy till 2030, up-date approved at 24/07/2013;  
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- (4) The National Commission of the State Public Utilities Regulation, tariff policy and rules;  
<http://nkp.gov.ua>;
- (5) Energy Law Guide 2<sup>nd</sup> edition - Traditional Energies, Renewable Energies, Carbon Trading; 2011; Arzinger, <http://arzinger.ua>;
- (6) PPP and tariff regulation in the water, wastewater, and district heating sectors; USAID; Apr 2012;  
<http://eef.org.ua>;
- (7) Ukrainian Public - Private Partnership Development Program (P3DP), USAID; <http://ppp-ukraine.org>;
- (8) Proceedings of the E5P Steering Group Meeting #4, Kiev, 1 Nov 2012;
- (9) Proceedings of the E5P Assembly of Contributors Meeting #2, London, 6 Dec 2012;
- (10) Review of World Bank CTF Public Sector Proposal; Ukraine District Heating Energy Efficiency Project, Dec 2013.

## **Abbreviations used:**

CHP	Combined Heat and Power	EE	Energy Efficiency
CTF	Clean Technology Fund	EPC	Energy Performance Contracting
DH	District Heating	GHG	Greenhouse Gas(es)
DHC	District Heating Company	GoU	Government of Ukraine
E5P	Eastern Europe Energy Efficiency and Environmental Partnership	IHS	Individual Heating Sub-stations
EBRD	European Bank for Reconstruction and Development	NCRCS	National Commission on Regulation of the Communal Services

## **Administrative information:**

**Consultant's name** Rainer Behnke  
**Consultant's address** D-14712 Rathenow, Germany  
**Consultant's contact details** E-Mail: [behnke-rainer@freenet.de](mailto:behnke-rainer@freenet.de)  
Phone: +49 160 5075540

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