

**Clean Technology Fund (CTF) Investment Plan for Ukraine**  
**Joint IBRD, EBRD, and IFC Mission to Ukraine**  
**February 5-8, 2013**

**Terms of Reference**

**1. Introduction**

The Government of Ukraine (GOU) has informed the International Bank for Reconstruction and Development (IBRD), the European Bank for Reconstruction and Development (EBRD), and the International Finance Corporation (IFC) of their support to update and revise the Clean Technology Fund (CTF) Investment Plan (CIP), which was endorsed by the CTF Trust Fund Committee in March 2010. The GOU has requested a Joint Mission, with IBRD as lead MDB, be fielded between February 5<sup>th</sup> and February 8<sup>th</sup> with the intent to submit the revised CIP for endorsement for the May 2013 meeting of the CTF Trust Fund Committee. The GOU, together with the Mission team, will review implementation status, discuss possible reallocation within priority sectors, assess the impact of such changes on achieving objectives and targets of the original CIP, and consult with various stakeholders on possible changes to the CIP.

**2. Country and Sector Context**

Currently Ukraine participates in two Kyoto Protocol mechanisms: Joint Implementation (JI) and international emissions trading of Assigned Amount Units (AAUs). Ukraine has made significant progress in setting up the necessary legal and institutional frameworks and in implementing these mechanisms. As of mid-2012, Ukraine had registered 102 JI projects that delivered around 86 million Emission Reduction Units (ERUs). Additional 30 million carbon units were sold as AAUs and Ukraine invested some of this money into domestic GHG reduction projects through the Green Investment Scheme. Ukraine is one of the most active countries in the JI market. As of June 2012, 41% of the world's ERUs were GHG reduction units from Ukraine. It is estimated that foreign investments in Ukraine's ERUs totaled about EUR 650 million by mid-2012; an additional EUR 470 million have been attracted into the Green Investment Scheme projects.

Despite all these activities targeted at GHG emissions reduction, Ukraine remains one of the most energy and carbon intensive European countries per unit of GDP. It has huge potential for GHG emissions abatement. More efforts need to be made by the government and industry to realize this potential through power sector modernization, implementation of renewable energy projects, reforms in transport and urban sectors and energy efficiency improvements, which will also contribute to energy security.

In 2010, GHG emissions totaled about 383.2 million tonnes of carbon dioxide equivalent (Mt CO<sub>2</sub>-eq) or 59% below 1990 levels and 4.9% higher than in 2009.

In 1990, Ukraine's emissions were 927 Mt CO<sub>2</sub>-eq. The largest fall in emissions occurred between 1990 and 1999, it was followed by an increase during the 2000s when emissions grew at a rate of 1.6% per year prior to the onset of the economic crisis in 2008-09. Trends in total GHG emissions were mostly underpinned by emissions from the energy sector, which on average comprised around 70% of total national GHG emissions.

Between 1990 and 2010, GHG emissions from the energy sector decreased by 60%, driven mainly by a sharp economic decline in the 1990s and the consequent decrease in primary energy consumption. In 2010, emissions in the energy sector were 290.9 Mt CO<sub>2</sub>-eq or around 76% of all GHG emissions in Ukraine (not including sequestration from land use, land-use change and forestry) and increased by 4.4% from 2009 levels. The increase was due to economic recovery after the global financial crises and increased fuel consumption. Around 85% of the energy sector emissions come from fuel combustion and about 15% are fugitive emissions. The main drivers of GHG emission trends in Ukraine have been the transition from a centrally planned to a market-based economy, structural changes in the economy (shift from energy-intensive production sectors towards services) and the decrease in energy consumption, as well as the changes in the structure of primary energy use with reduced use of coal and increased use of natural gas.

Since 2001, GHG emissions have been increasing due to the growing demand for energy to meet the needs of the recovering mining sector, metal production, chemical industries and the growing number of vehicles. Recently, the drop in the output of export-related industries resulting from the financial and economic downturn in the second half of 2008 resulted in a slowdown in the growth of GDP from 7.9% in 2007 to 2.3% in 2008. This financial and economic downturn led to a decrease in GHG emissions, mainly from the manufacturing, industrial process and construction sectors.

### **3. GOU Policies and Measures**

The policy and sector frameworks and priorities discussed in the original CIP remain in effect. Ukraine has significant GHG mitigation potential, mainly in the energy supply sector, and related to energy consumption in the residential and commercial sectors, primarily buildings and appliances, and in industry. However, little of this potential has been tapped, owing to a number of regulatory, economic, technical and infrastructure barriers. In addition, the lack of systematic planning, monitoring and evaluation of the programmes and measures at the national and sectorial levels, is a challenge that needs to be addressed in order to tap this mitigation potential

Policy framework and cross-sectorial measures include the following key documents:

- the national Plan for the Implementation of Provisions of the UNFCCC and Kyoto Protocol (2005, updated 2009);
- the strategy of National Policy for Environmental Protection to 2020 (2010);
- the national Action Plan on Environmental Protection for 2011-2015; and
- the state Environmental Monitoring Programme for 2008-2012.

Ukraine's national plan is an overarching strategic document that outlines the general framework and actions to implement the Climate Change Convention and its Kyoto Protocol. In addition, there are some initiatives to develop a national mitigation plan, several sectorial programmes and regional initiatives. These initiatives are mostly driven by the development goals of economic sectors and not necessarily by climate policy objectives.

The national plan includes provisions for the preparation of the annual submission of Ukraine's GHG inventory, the development of joint implementation infrastructure and creation of a legal basis for regulating GHG emissions, including development of national and regional plans, research and public awareness programmes. In 2009, the national plan was revised to reflect the outcome of the international climate change negotiations. Among the sectorial programmes, energy-related programmes play the key role for climate change mitigation. Ukraine highlighted in its Third, Fourth and Fifth National Communications to the UNFCCC a major focus on energy efficiency programmes, which aim to reduce the country's dependence on primary energy imports while also providing emissions reductions. Energy efficiency is one of the key themes in the primary energy-related policy strategies, programmes and plans at the national and regional levels, namely the Energy Strategy of Ukraine to 2030 (both the 2006 version and the draft update in June 2012) and the Energy Efficiency Programme for 2010-2015.

Recently Ukraine launched a number of initiatives aimed at further implementation of climate change-related policies, mainly in the context of the overall environmental policy. The key law underpinning Ukraine's climate change policy is the Law on Main Principles of State Environmental Policy of Ukraine for the period to 2020, adopted by the parliament in 2010.

Finally Ukraine started developing its own Carbon Market and requested support and received 1<sup>st</sup> tranche from PMR on Development of Market Readiness Proposal as a first building bloc on creation of Local Carbon Market.

#### **4. CTF: Rationale for Revision and Opportunities**

The original CIP intended to support the implementation of the GOU's Energy Strategy through a combination of renewable energy and energy efficiency. Specifically, the CIP proposed CTF co-financing for reducing risks and overall costs of investing in renewable energy, energy efficiency in residential and government buildings, district heating and industry, introduction of smart grid components in the transmission system, and zero emissions power generation from the gas network. The priority activities that were selected for CTF co-financing, including implementing MDBs, are:

- (i) Ukraine Renewable Energy Financing Facility (EBRD, IFC): direct financing to 100MW generated from large-scale private sector renewable energy development (particularly wind farms) and funding through financial intermediaries for 80MW generated from smaller/medium scale projects (such as small hydro and biomass);
- (ii) Energy Efficiency (EBRD, IBRD, IFC): an energy efficiency program targeting reconstruction and refurbishment of municipal and mixed ownership housing stock,

upgrade of Government-owned buildings, decrease losses in district heating supply, and industrial energy efficiency;

- (iii) Smart-grids (IBRD) management and control systems that would allow loss reduction through demand management and integration of large-scale integration of intermittent renewable sources; and
- (iv) Zero Emissions Power from the Gas Network (EBRD, IBRD): commercial-scale demonstration of zero-emissions power generation from waste heat recovered from compressors in Ukraine's gas network.

Indicative Financing Plan (in US\$ million) - endorsed by the CTF Trust Fund Committee in March 2010:

Program <u>Stage 1</u>	Ukraine Counterpart	MDBs				Private Sector	CTF			Total	Of which CTF Grant Funds
		EBRD	IBRD	IFC	Other		EBRD	IBRD	IFC		
Ukraine Renewable Energy Financing Facility		250		50		30	50		25	405	1
Energy Efficiency	250	200	250	25		200	37.5	50	37.5	1,050	1
Smart Grids	100		300					50		450	0.5
Zero Emissions Power from the Gas Network	100	250	250				50	50		700	0
<b>Total Stage 1</b>	<b>450</b>	<b>700</b>	<b>800</b>	<b>75</b>	<b>0</b>	<b>230</b>	<b>137.5</b>	<b>150</b>	<b>62.5</b>	<b>2,605</b>	<b>2.5</b>
		<b>1,575</b>					<b>350</b>				

As of January 2013, out of US\$350 million that has been endorsed to Ukraine CIP, the CTF Trust Fund Committee has approved approximately US\$50 million for projects and project preparation grants. Hence, the total allocation remaining for Ukraine is US\$300 million. The table below summarizes the allocation of CTF resources as of January 2013:

Ukraine CIP	US\$ million
<b>CTF Allocation (March 2010)</b>	350.000
<b>Projects Approved</b>	
Ukraine Renewables Direct Lending Facility (EBRD)	27.603
Novoazovsk Wind Farm (EBRD)	20.689
<b>Project Preparation Grant Approved</b>	
Energy Efficiency Project (IBRD)	1.050
Smart Grid Project (IBRD)	0.525
<b>CTF Allocation remaining as of January 2013</b>	300.133

## 5. Joint Mission Objectives and Logistics

The joint mission is proposed for February 5-8, 2013 primarily in Kiev, Ukraine. The objectives of the mission are to: (i) review implementation status of the original CIP, including readiness of all existing components to move forward in a timely fashion; (ii) further assess circumstances and rationale for revising the CIP; (iii) discuss possible reallocation of CTF resources within the existing priority sectors, if necessary, and assessing the impact of such changes on achieving the objectives and targets of the original CIP; and (iv) consult with the GOU and other key stakeholders on the proposed changes. A follow-up mission can take place before finalizing the revised IP only if required.

The joint mission will discuss the proposed revised CIP with the relevant government Ministries and other stakeholders including the State Environmental Investment Agency (SEIA) as focal point for CTF IP Update in Ukraine as well as will include: Ministry of Energy and Coal Industry, National Energy Regulatory Commission, Ministry of Regional Development, Building and Communal Services; National Commission for Regulation of Communal Services of Ukraine, Ministry of Economic Development and Trade of Ukraine, Ministry of Finance of Ukraine, State Agency on Energy Efficiency & Energy Saving of Ukraine. The mission will also exchange information and coordinate with other donors engaged in climate change mitigation strategies and implementation

The proposed estimated budget for the joint mission and completion of the CIP Update is US\$109,000 broken down as follows:

- IBRD: US\$44,000
- EBRD: US\$30,000
- IFC: US\$35,000

The contact point for the GOU is Mr. Mikhail Koval (Head of Department for International Cooperation, JI Projects and National GHG Inventory System at SEIA). The contact point will be expected to arrange for meetings with key GOU ministries and agencies, convene decision makers to review interim results from the mission, and provide summary briefing and conclusions at Ministerial level.

Contact persons at the MDBs are:

- IBRD: Gevorg Sargsyan, CTF Coordinator ([gsargsyan@worldbank.org](mailto:gsargsyan@worldbank.org))
- EBRD: Andreas Biermann, CTF Coordinator ([BiermanA@ebrd.com](mailto:BiermanA@ebrd.com))
- IFC: Joyita Mukherjee, CTF Coordinator ([jmukherjee1@ifc.org](mailto:jmukherjee1@ifc.org))

## Annex – 1

### Terms of Reference for Joint MDB mission to Support Revision of CTF Investment Plan for Ukraine

#### Pre-mission activities, ongoing or completed

The country teams of IBRD, EBRD, and IFC have conducted various desk studies, sector analyses, and project-level feasibility assessments, and have identified sectors and potential projects in Ukraine that meet CTF investment requirements. Short scoping mission of MDBs also took place to discuss the date and TOR for the joint MDB IP Revision mission in February 5-8, 2013.

#### Mission objectives, outputs, dates, and composition

The proposed mission to Ukraine has the following objectives:

- (i) Agree on a strategic-level rationale for the revised CIP which is in line with the GOU strategies for low-carbon development including energy efficiency and renewable energy;
- (ii) Agree on possible reallocation of CTF funds from public to private sector if necessary, and agree on types of priority projects to be included in the revised CIP submitted for CTF financing; and
- (iii) Agree on roles, responsibilities and timeline for finalization of the revised CIP.

#### **Specific mission details**

Objectives	Outputs	Compositions
1. Review implementation status of the original CIP, including readiness of all existing components to move forward in a timely fashion	Status report of original CIP meetings for clarification of GOU mitigation priorities	MDB joint mission team, GOU representatives, project stakeholders
2. Further assess circumstances and rationale for revising the CIP and review MDBs portfolio and pipeline projects that meet CTF criteria	Summary of desk review and discussions with potential project stakeholders	MDB mission team, GOU representative, project stakeholders
3. Discuss possible reallocation of CTF resources within the existing priority sectors, if necessary, and assessing the impact of such changes on achieving the objectives and targets of the original CIP	MDB joint mission Aide-Memoire and draft of Revised CIP	MDB mission team, GOU representatives
4. Consult with the Government, civil society organizations and other key stakeholders on the consultation process and possible changes	Draft of Revised CIP	MDB joint mission team, GOU representatives, private sector representatives, UN agencies and bilateral donors
4. Review of draft Aide Memoire by GOU and discussion with MDB joint mission	Wrap-up meeting	MDB mission team, GOU representatives

### Post mission activities (summary of tasks and timing)

- (i) Consultation on draft revised CIP by end of February 2013
- (ii) Finalization of revised CIP by February 28, 2013.
- (iii) Submittal of revised CIP to the Trust Fund Committee in March 2013.

### Country institutions involved

Below is the list of institutions that can be involved in mission work:

- State Environmental Investment Agency (SEIA) Ministry of Energy and Coal Industry,
- National Energy Regulatory Commission,
- Ministry of Regional Development, Building and Communal Services;
- National Commission for Regulation of Communal Services of Ukraine,
- Ministry of Economic Development and Trade of Ukraine,
- Ministry of Finance of Ukraine,
- State Agency on Energy Efficiency & Energy Saving of Ukraine

### Status of coordination with UN agencies and other development partners.

A meeting with all development partners with active programs in climate change, including the UN agencies, will be convened during the mission.

## Annex – 2

### CTF Joint Mission Composition

<b>Mission Team</b>
Gevorg Sargsyan, CTF Coordinator, IBRD
Dmytro Glazkov, Operations Officer based on Kiev, IBRD
Astrid Manroth, Senior Energy Specialist based on Kiev, IBRD
Yadviga Semikolenova, Energy Economist, IBRD
Andreas Biermann, CTF Coordinator, EBRD
Sergiy Maslichenko, Senior Energy Efficiency and Climate Change Business Development Manager, EBRD
Joyita Mukherjee, CTF Coordinator, IFC
Patrick Avato, Climate Change Lead, IFC