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**PUBLIC SECTOR PARTICIPATION IN THE
ENERGY EFFICIENCY EQUITY FUND**

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PARTNERSHIPS

**ENVIRONMENTAL POLICY, INTERNATIONAL COMPETITIVENESS AND FINANCE:
CAN WE AFFORD A BETTER ENVIRONMENT?**

**PUBLIC SECTOR PARTICIPATION IN THE
ENERGY EFFICIENCY EQUITY FUND**

Summary

The Energy Efficiency 21 Project (EE21) promotes the formation of an energy efficiency market in the countries of South-Eastern Europe (SEE) and Eastern Europe, Caucasus and Central Asia (EECCA) regions so that cost-effective investments can provide a self-financing method of reducing global greenhouse gas emissions.

This document contains a description of a new project on “Financing Energy Efficiency Investments for Climate Change Mitigation”, which will provide for the establishment of dedicated source of equity and quasi-equity finance – an Investment Fund – with the participation of public and private sector investors. The project summary is annexed.

Introduction

1. This proposed Category I document has been prepared by the secretariat of the United Nations Economic Commission for Europe (UNECE) Energy Efficiency 21 Project (EE21).
2. The inefficient and polluting energy systems in South-Eastern European (SEE) and Eastern Europe, Caucasus and Central Asia (EECCA) countries are glaring economic and environmental problems interwoven with promising opportunities for reducing global greenhouse gas (GHG) emissions. For several decades, East European economies suffered from the low productivity and living standards associated with inefficient energy use. During the last few years, national programmes, together with bilateral and international projects, have begun to develop the policy reforms and financial engineering skills needed for energy efficiency and renewable energy investments in Eastern Europe.
3. For more than 15 years, EE21 has operated to enhance trade and cooperation in energy-efficient, environmentally sound techniques and management practices, and to promote energy efficiency market formation and investment project development.
4. EE21 work is the result of specific partnerships between the public and private sector at the local level, with East European non-governmental organizations and Western professional organizations that serve the business community. It establishes strategic partnerships between the United Nations executing and cooperating agencies, the private sector, host country authorities and government sponsors.
5. Against this background, the EE21 Project on Financing Energy Efficiency Investments for Climate Change Mitigation (ECE/ENERGY/2006/6) provides for the establishment of a public-private partnership dedicated fund to finance energy efficiency investments in UNECE transition economies.

I. FINANCING ENERGY EFFICIENCY INVESTMENTS FOR CLIMATE CHANGE MITIGATION

6. Since 1991, EE21 has been devoted to achieving sustainable development in the energy sector at the regional level. The main objective of EE21 is to assist SEE and EECCA countries in enhancing their energy efficiency, diminishing fuel poverty, and meeting international environmental treaty obligations under the United Nations Framework Convention on Climate Change (UNFCCC) and UNECE. EE21 focuses on developing the skills of private and public sector experts at the local level for energy efficiency and renewable energy investments.
7. Since 2000, investment projects to reduce carbon emissions have been developed under EE21 with local counterparts in Belarus, Bulgaria, Kazakhstan, Russian Federation, and Ukraine. While approximately \$60 million of proposals have been prepared, investment projects of \$14.9 million have been financed to date. These account for an estimated 136,000 tons of carbon dioxide (CO₂) avoided per year that could be compared to eliminating CO₂ emissions of 68,000 cars. Financial institutions such as the World Bank, the European Bank for Reconstruction and Development (EBRD) and the Nordic Investment Bank have played a key role in this respect. But they have also shown that this is a time-consuming and labour-intensive process that needs to become much more fluid and business-like in order to succeed on any meaningful scale.

8. To respond to this need, a new project on Financing Energy Efficiency Investments for Climate Change Mitigation will provide for the establishment of a Public-Private Partnership Fund dedicated to finance energy efficiency investments in UNECE transition economies. This project, part of the EE21 Project Plan 2006-2009, is designed to go significantly beyond what has been done previously in terms of investments financed in selected East European locations. It aims at promoting the formation of an energy efficiency market in Eastern European and EECCA countries so that cost-effective investments can provide a self-financing method of reducing global GHG emissions. It will complement other initiatives and assist participating countries to address the financial, technical and policy barriers to energy efficiency and renewable energy investments.
9. UNECE is the executing agency of this project. The main co-financing partners are the United Nations Foundation (UNF), the Global Environment Facility (GEF), Fonds Français pour l'Environnement Mondial (FFEM) and the European Business Congress (EBC).
10. The project will implement three core activities:
- (a) Establishing a dedicated source of equity and quasi-equity finance – an Investment Fund with the participation of public and private sector investors;
 - (b) Enhancing the skills of the private and public sector experts at the local level to identify, develop and submit bankable projects for financing to the Fund and/or other sources of finance;
 - (c) Providing assistance to municipal authorities and national administrations to introduce the economic, institutional and regulatory reforms needed to support these investment projects.
11. Based on the lessons learned from earlier financing mechanisms, the project will lead to the establishment of a \$250 million public-private equity fund that can complement other financing schemes. This Investment Fund will be managed by an experienced private fund management company. It will be linked to a pipeline of projects that can provide for large-scale participation of private sector investors in partnership with public entities. As a result, the project is expected to leverage an investment volume of up to \$2 billion for energy efficiency and renewable energy projects.
12. The outcome of the project will be solid investments that could represent a reduction of GHG emissions of 10 million tons of CO₂ per year and enhanced skills of local experts and policy reforms in participating countries. Hence, direct CO₂ emissions reduction for this project stands at 200 million tons if we consider a 20-year period, according to GEF standards. Taking into account the possibility that the Fund is replicated and also extended to other countries after demonstrating success, direct post-project CO₂ emissions reduction could be estimated at a 200 million tons level over a 20-year period. Finally, regarding indirect emissions reduction, a conservative estimate based on the volume of the most cost-effective energy efficiency investments leads to a CO₂ reduction figure of 600 million tons over 20 years.

II. PARTICIPATION IN THE ENERGY EFFICIENCY INVESTMENT FUND

13. The Fund, ranging between \$100 million and \$250 million, will be established as a dedicated source of equity and quasi-equity finance with the participation of public and private sector investors.
14. In order to make this Fund sufficiently attractive to private sector investors, it is intended to mitigate the risks for the private sector through a contribution of the public sector representing around 35 per cent of the total capital commitments. This public participation is expected to come from the Governments of the targeted countries in the region where the Fund will operate as well as from Governments from countries of the Organisation for Economic Co-operation and Development (OECD) or other possible donors.
15. The Fund will invest exclusively in energy efficiency and renewable energy projects that have a quantifiable impact on the reduction of GHG emissions and that are located in the 12 participating countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Kazakhstan, Moldova, Romania, Russian Federation, Serbia, The Former Yugoslav Republic of Macedonia, and Ukraine.
16. It is expected that the Fund will be able to provide equity and quasi-equity financing for setting up project companies and Special Purpose Vehicles particularly in the case of on-grid renewable energy projects as well as Energy Service Companies, particularly for dealing with small-scale energy efficiency investments. However, the Fund does not intend to play the role of a bank and will not provide senior loans or guarantees. The conditions and limitations under which these instruments will have to be used will also be further defined during the course of project operations and will result in an Investment Memorandum to be agreed upon by all investors in the Fund.
17. In addition, the creation of the Fund will be complemented and strengthened through specific technical assistance for building financial engineering skills, removing policy barriers and promoting awareness on the energy saving contribution to climate change mitigation supported mainly by UNF, FFEM and GEF. An amount of \$7,75 million has been approved for technical assistance activities.
18. In the framework of the “Environment for Europe” process, ministers may wish to welcome the EE21 “Financing Energy Efficiency Investments for Climate Change Mitigation” as a useful contribution for addressing the financial, technical and policy barriers to energy efficiency and renewable energy investments. They may also consider bringing the project to the attention of their relevant national ministries or agencies for assessment of their interest in participating in the Fund.

Annex

Project Summary

I. FINANCING ENERGY EFFICIENCY INVESTMENTS FOR CLIMATE CHANGE MITIGATION

A. Project justification

1. The countries of South-Eastern Europe (SEE) and Eastern Europe, Caucasus and Central Asia (EECCA) suffer from severe economic and environmental problems caused by their inefficient and polluting energy systems. At the same time, some of the best opportunities for reducing global greenhouse gas (GHG) emissions will come from investments to improve energy efficiency in these countries. While the East European economies are two to four times more energy-intensive than the Western market economies, the energy intensity of EECCA economies increased sharply during the first decade of economic transition, although it is now well understood that efficient and reliable energy systems are essential for managing economic transition, enhancing environmental conditions and ensuring energy security.

2. Energy efficiency improvements as well as renewable energy investments are therefore urgently needed, also because this is the only self-financing method of reducing GHG emissions in these countries. However, at present, financing energy efficiency or renewable energy in Eastern Europe is still a niche industry. Projects may have high internal rates of return (IRRs), but do not capture the attention of investors or commercial banks because most projects are small and unfamiliar to local lending institutions. Even high IRRs cannot compensate for the high transaction costs banks incur to undertake the due diligence for small projects and to establish political, financial and institutional support for them. In addition, while many experts in Eastern Europe know the technical fixes needed to improve energy efficiency in their municipalities, power stations or factories, they do not know how to formulate investment projects so that they meet banks rules, standards and criteria. Bearing in mind the lack of specific incentives in most of the participating countries to introduce the relevant regulatory, policy and institutional reforms in the energy sector, all these barriers represent a forbidding environment for realizing energy efficiency or renewable energy investments.

3. On the one hand, it has become clear that building technical and financial engineering skills, removing policy barriers and giving local stakeholders experience in financing investments are some of the key changes needed to actually achieve GHG emissions reductions on a large scale. In addition, providing a dedicated funding resource where both the public and private sectors can participate is a necessity in order to meet the huge capital needs that are required to achieve a real impact on the energy production and use patterns in these countries.

4. On the other hand, the substantial experience acquired during the last 10 years has shown clearly that it is possible to identify, develop and finance energy efficiency and renewable energy investment projects in Eastern Europe. In addition, with energy market deregulation, further energy price increases and reforms introduced in several countries, energy efficiency and renewable energy technologies, and related services are beginning to become commercially

attractive. Several key projects completed recently with the support of the international community were designed to take advantage of these market conditions by providing capacity-building and promoting policy reforms to support energy efficiency and renewable energy investments. But undoubtedly the major bottleneck is unavailability of project finance from dedicated financial instruments, as commercial banks are still reluctant to apply project finance models to energy efficiency and renewable energy projects. In the absence of suitable investment vehicles, private banks and private sector investors remain hesitant to commit themselves to this type of project. As a result, under present conditions in SEE and EECCA countries, once the pre-feasibility study business plans have been prepared, finding financing for each project is a time-consuming and expensive process. Therefore, linking an investment project pipeline to pre-approved and dedicated funds would be the best and possibly the only way to make significant progress in this field.

5. As a result, the project would address the following three barriers:
 - (a) The lack of awareness on the part of national government ministries and local authorities, as well as the private sector, regarding energy efficiency and renewable energy issues, particularly from the perspective of creating a non-distorted energy market;
 - (b) The lack of expertise in preparing bankable proposals, which has to be overcome rapidly in order to build a pipeline of projects that, in itself, would make local financial institutions more confident that a market does exist, and as a result, make them more motivated to provide additional financing;
 - (c) The lack of a dedicated funding source, given that the capital requirements for significant emissions reductions in these regions are so large that only a growing market for implementing energy efficiency technologies with private sector participation will really have an impact.

B. Development objective

6. The development objective is to promote an investment climate in which self-sustaining energy efficiency and renewable energy projects can be identified, developed, financed and implemented by local teams in municipalities, factories and energy utilities. The intention is to replicate successful measures nationally in SEE and EECCA countries once they have been proven on a limited scale. As described in the objectives, activities, and other sections of the Project Document, the project is intended to improve the maintenance of public buildings, hospitals in particular; provide relief and increase the security of urban poor with improved municipal lighting; and lessen the burden on Governments by producing budget savings for municipalities through more efficient district heating systems.

C. Immediate objectives and outputs

7. The new phase of the Energy Efficiency 21 Project (EE21) is to promote the formation of an energy efficiency market in SEE and EECCA countries so that cost-effective investments can provide a self-financing method of reducing global GHG emissions. It will complement other initiatives and assist participating countries to address the financial, technical and policy barriers to energy efficiency and renewable energy investments.

8. The project will:

- (a) Establish a dedicated source of equity and quasi-equity finance – an Investment Fund – with the participation of public and private sector investors;
- (b) Enhance the skills of the private and public sector experts at the local level to identify, develop and submit bankable projects for financing to the fund and/or other sources of finance;
- (c) Provide assistance to municipal authorities and national administrations to introduce economic, institutional and regulatory reforms needed to support these investment projects.

D. Project execution

9. The project is executed by the UNECE Committee on Sustainable Energy, Energy Efficiency 21 Project (EE21). While UNECE is responsible for the overall execution of the project, EE21 is mainly concerned with technical assistance on the second and third objectives related to capacity building and policy reforms described above. EE21 is executed through governmentally appointed national participating institutions such as the governmental and NGO energy efficiency agencies in 32 UNECE member States. It is supported by the United Nations regular budget and by an extrabudgetary trust fund with financial contributions from government departments, the private sector and foundations. EE21 includes the participation and advice of bilateral aid agencies, international organizations and international financial institutions. An elected Bureau composed of a Chair and five Vice-Chairs guides the execution of the EE21 work programme. During the last three years, EE21 has launched or completed six subregional projects that brought together a selection of interested member States, donors and international institutions. The engagement of personnel and the procurement of supplies or equipment financed from extrabudgetary funds are subject to the regulations, rules, policies and procedures of the United Nations.

II. ENERGY EFFICIENCY EQUITY FUND: A PUBLIC-PRIVATE PARTNERSHIP

A. Energy Efficiency Investment Fund

10. There is relatively limited experience to draw upon from successful start-ups of full-fledged private equity funds dedicated to the financing of energy efficiency and renewable energy investments. Only a few initiatives that have been developed during the last few years have been documented, such as the Renewable Energy and Energy Efficiency Fund of the International Finance Corporation (IFC) and the Energy Efficiency and Emissions Reduction Equity Fund of the European Bank for Reconstruction and Development (EBRD). However, these initiatives do demonstrate the feasibility of attracting private investors to what is still perceived as a high-risk market.

11. The difficulties faced by some of these efforts might have had a negative impact on the financial and investor communities, which may have lost confidence in the actual need for these mechanisms. On the other hand, the worsening evolution of world climate change is leading a number of key stakeholders in the private sector to adopt a more aggressive and bold attitude, provided the lessons of previous initiatives are taken into account.

12. The Fund planned for this project will provide equity and quasi-equity to Special Purpose Vehicles (SPVs) (usually around one third of the total capital needs) and these entities will have to find on the local market the debt portion needed to finance projects in all cases. Apart from finding this debt portion directly from local commercial banks, a solution will also be provided through the mechanisms set up in the framework of these three projects. Contacts have therefore taken place with the IFC, Global Environment Facility (GEF) and the United Nations Development Programme (UNDP) task managers and the managers of these projects in order to ensure that close coordination is established between the new Fund planned for this project and the various complementary facilities.

13. It should be emphasized that the most powerful instrument to trigger the realization of energy efficiency investments is through the creation of Energy Service Companies (ESCOs), as demonstrated by the successful track record of the EBRD in Central Europe and also by the positive results of the GEF-supported Energy Management Company project of the World Bank in China and the IFC Hungary Energy Efficiency Co-Financing Programme project in Hungary. The participating countries of the present project unfortunately lack this kind of private structure, mainly because potential local ESCO sponsors lack the equity basis to form such companies at an adequate level of reliability and creditworthiness.

14. The planned Fund will address precisely this issue, which will help to set up ESCOs and other similar SPVs suitable for bundling a large number of relatively small energy efficiency investments or renewable energy projects that might not be directly financed by local or international banks. It is thus obvious that these SPVs might become an important user of the above-mentioned existing GEF financing facilities, when implemented either directly or through their local partner banks. It is therefore clear that the planned Fund will be complementary and provide added value to these existing, planned and forthcoming financial facilities.

B. Public-private partnership

15. The Fund will be established as a public-private partnership, which means that capital investors in the Fund will come from both the public sector and the private sector. Based on preliminary discussions with potential investors, a few basic principles can be outlined as follows.

C. Capital commitments and Fund size

16. As an outcome of a preliminary assessment phase with various financial institutions and industrial enterprises, it appeared that a realistic target might be the creation of a Fund ranging between \$100 million and \$250 million. It is therefore envisaged to set up a first closing of the Fund at the level of \$100 million, with possible further closings at a later stage, the objective being that this first closing takes place six months at the latest after the dissemination of the official Investment Memorandum describing the general terms and conditions of the Fund.

17. These participations will not be considered as grants or subsidies since, when the Fund will exit from its investments (see below), these capital commitments will be recovered by the public investors, but they will simply yield a return lower than the one allocated to the private investors, in order to provide the latter an incentive to participate.

18. During the fund-raising phase, potential investors will be sought from the financial sector (with which the United Nations Environment Programme (UNEP) has established a strategic partnership through the UNEP Finance Initiative and the Sustainable Energy Finance Initiative programme and from the industrial sector, particularly in the utilities area). A capital commitment floor will be set, likely to be at the level of \$10 million.

D. Fund investments

19. The Fund will invest exclusively in energy efficiency and renewable energy projects that have a quantifiable impact on the reduction of GHG emissions and that are located in the 12 participating countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Kazakhstan, Moldova, Romania, Russian Federation, Serbia, The former Yugoslav Republic of Macedonia, and Ukraine. A list of eligibility criteria will be established to further determine which kind of projects will be deemed acceptable and under which conditions and/or restrictions.

E. Fund governance

20. The Fund will be governed by a Board of Directors, chaired by the Lead Investor(s), (meaning the investor(s) that will commit the largest investment into the Fund). Each investor in the Fund will have a seat on the Board, and voting rights in proportion to its capital commitment. The Board will in particular take decisions regarding the general policy and the projects the Fund will invest in. It will be supported in this role by two ad hoc committees, the Investment Committee and the Policy and Strategy Committee, in which selected investors will participate as well. The role and composition of these committees will be further defined during the preparation of the Fund Investment Memorandum, in liaison with the Lead Investor(s).

F. Fund duration and exit

21. It is anticipated that an important pipeline of projects is already available consisting in a number of bankable proposals. The Investment Period (meaning the time during which the Fund will invest its whole aggregated capital commitments) will therefore not exceed four years from the official closing date. It is then expected that the Fund will be in a situation to exit from its investments (by selling its shares in the capital of the project companies through any other predetermined means) after four to five years, making the total project duration around nine years. It should be noted that the contemplated structure is not one of a revolving fund: Once the capital is committed, the returns on investments are obtained under the form of dividends or at the exit date and cannot be reinvested, unless the Board of Directors decides otherwise.

G. Fund returns

22. It should be recognized that energy efficiency or renewable energy projects can hardly, for the moment due to the current situations in terms of available technologies and tariffs structure, yield the same level of returns as private investors are accustomed to receiving when investing in other sectors. As a result, investors in the proposed Fund must take into account a patient capital approach structure of the Fund. Therefore, as an incentive for private sector institutions to participate, the status accorded to the public and private capital commitments will be different. Again, the final scheme is to be further determined but will be based on the following ideas:

- (a) If the global fund return is above a certain threshold, public and private investors will receive the same level of return proportionally to their commitments;
- (b) If the global fund return is below various predetermined thresholds, the public investors' returns will be reduced accordingly so that the return share of the private sector can be increased.

H. Fund management

23. The Fund will be managed by an experienced Fund Manager hired through procedures that will be established at the outset of the project with the Lead Investor(s).

24. The Fund Manager will in particular:

- (a) Supervise the fund-raising phase;
- (b) Prepare all legal documentation regarding the establishment of the Fund and the investors' capital commitments;
- (c) Identify the possible investments and prepare the project submissions to the Fund's internal bodies (Investment Committee and Policy and Strategy Committee);
- (d) Implement and monitor these projects;
- (e) Report to the Board of Directors of the Fund;
- (f) Organize the Fund exit from the projects.

25. The Fund Manager will receive an annual remuneration to be negotiated. As an incentive to produce good results, he/she also usually receives a portion of the actual returns after exiting the project (the carried interest).

I. Investment Fund activities

26. Activities related to the creation of the Investment Fund will include:

- (a) The preparation of an Investment Memorandum under the responsibility of a Lead Investor, to be sent out to all potentially interested public and private investors and describing in depth the Fund's features and characteristics as well as the legal and fiscal modalities for investors to enable them to make commitments to the Fund;
- (b) An analysis of the technology risks of energy efficiency and renewable energy technology and the political risks of participating countries based on the past experience of UNEP, UNECE, and other initiatives from a wide range of international sources;
- (c) The organization of meetings and workshops in various places in OECD countries, as well as in the targeted region, to advertise the Fund, to discuss the key issues related to its establishment with the potential investors, and, if needed, to alter accordingly the proposed structure to meet the specific needs or requirements of the key investors;
- (d) The selection of a reputable legal and fiscal advisor capable of establishing the Fund in the most transparent and cost effective conditions, in an acceptable fiscal location meeting international rules and standards, and to prepare all necessary legal agreements between the Fund and its investors as well as between the Fund and its investment companies; and
- (e) The preparation of the terms of reference for the selection of a Fund Manager and the organization of an international tender.

J. Investment Fund outputs

- (a) An Investment Memorandum: a legally enforceable document to be printed and broadly disseminated among the financial and investor community;
- (b) Investor Seminars: presentations and workshops to describe and discuss the main characteristics of the proposed Fund;
- (c) An Energy Efficiency Investment Fund: the establishment of a public private partnership Investment Fund to provide \$250 million of equity or quasi-equity to project sponsors; and
- (d) The selection of an experienced Fund Manager.
