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COMMITTEE ON SUSTAINABLE ENERGY

Steering Committee of the Energy Efficiency 21 Project

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Geneva, 3 - 5 June 2009
Item 7 of the provisional agenda

**PROJECT PLAN 2009-2012
FOR THE ENERGY EFFICIENCY 21 PROJECT**

DRAFT

Note by the secretariat*

At its nineteenth session on 28-29 May 2008, the Steering Committee of the EE21 Project requested the secretariat to prepare a draft Project Plan 2009-2012 for the sixth three-year phase of the Energy Efficiency 21 Project, including subregional projects and the work methods and modalities for cooperation with the Energy Charter and International Energy Agency, for consideration at the next session of the Steering Committee (ECE/ENERGY/WP.4/2008/3, para. 24 (l)).

* The document was submitted after the due date due to consultations with Governments.

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INTRODUCTION

1. The seventeenth session of the Committee on Sustainable Energy held in November 2008 welcomed the progress achieved in the implementation of the Energy Efficiency 21 project (EE21) and its sub-projects (ECE/ENERGY/78). Climate change mitigation efforts are made through the EE21 Project, which has operated since 1991 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.

2. The Committee on Sustainable Energy noted with appreciation the results of the first year of operations of the sub-project on Financing energy efficiency investments for climate change mitigation and, in particular, the results of the assessment missions to the participating countries; welcomed the decision of the Steering Committee to implement the three projects supported by the Russian Federation (Increasing energy efficiency for secure energy supplies; Development of the renewable energy sector in the Russian Federation and Commonwealth of Independent

States; and Global Energy Efficiency 21) as subregional projects of EE21; took note of the results and progress in the operation of the European Clean Energy Fund in relation to the Energy Efficiency 21 Project; and expressed appreciation to the National Participating Institutions and National Coordinators for their support in the implementation of project activities.

3. The Steering Committee of the EE21 Project at its nineteenth session on 28-29 May 2008 expressed appreciation for the financial support to the project provided by the United Nations Foundation and United Nations Fund for International Partnerships; Ministry of Foreign and European Affairs of France; French Global Environment Facility; United Nations Environment Programme/Global Environment Facility; European Business Congress; and the Ministry of Foreign Affairs of the Russian Federation (ECE/ENERGY/WP.4/2008/3, para. 24 (p)).

I. OBJECTIVES, ACTIVITIES AND OUTPUTS

4. Following the previous phases and in line with the strategy of the EE21 Project to promote regional initiatives on energy and sustainable development, the General and Immediate Objectives of the Project for 2009-2012 are described below. The structure of the Energy Efficiency 21 Project provides for cross-cutting Objectives and Activities that are largely implemented through sub-projects in which the United Nations Economic Commission for Europe (UNECE) serves as the Executing Agency, Associated Agency or provides direct value-added information dissemination services.

5. The project will assist economies in transition to develop and promote sustainable energy policies, pursue energy efficiency strategies, reduce greenhouse gas emissions to meet international treaty obligations and enhance the security of energy supplies by producing the specific outputs listed below from operational activities in the industry, housing and services, transport and energy sectors through national actions, bilaterally and multilaterally especially through the UNECE.

General Objective

Enhance regional cooperation on energy efficiency market formation and investment project development to reduce greenhouse gas emissions in economies in transition.

Immediate Objectives

Immediate Objective 1: Accelerate regional networking between national participating institutions and international partners by enhanced Internet communications for value added information transfers on financing energy efficiency projects and training, contributing to regional cooperation on sustainable energy development and debate to mitigate global energy security risks.

Output 1.1 Energy Efficiency 21 Website: www.EE-21.net

Activities: Strengthening and sustainable development of the EE21 website with the following features:

- 1.1.1 Multilingual English and Russian versions with reports posted in both languages;
- 1.1.2 Expanded links to other websites;
- 1.1.3 On-line distance training on project finance and the Kyoto Protocol mechanisms;
- 1.1.4 On-line portfolio of investment opportunities and other related services.

Output 1.2 Networking should be strengthened to comprise in-depth information exchanges and discussions during project meetings, seminars and related events.

Activities:

- 1.2.1 Organization of specific seminars to develop and strengthen networking activities and information exchanges;
- 1.2.2 Training workshops organized to harmonize specific tools for networking activities;
- 1.2.3 Specific advisory services provided for policy reforms and institutional capacity building to facilitate exchange of information and development of awareness on the link between energy efficiency and climate change mitigation.

Immediate Objective 2: Promote municipal level projects to enable local and concrete Energy Efficiency development, also strengthening reforms, skills and capacities needed for investment projects that meet international environmental treaty obligations under the United Nations Framework Convention on Climate Change (UNFCCC) and the UNECE.

Output 2.1 Municipal Level Projects.

Activities: Facilitate and promote capacity building at municipal and local technical expert level to identify, develop, finance and implement Energy Efficiency projects and enhance public and private partnerships for investment opportunities, through:

- 2.1.1 A Study to define terms, definitions, units of measurement and templates suitable for project selection and standard presentation of energy efficiency and/or renewable energy investments developed within the framework of EE21 work;
- 2.1.2 Training seminars to enhance awareness from the part of national government ministries and local authorities as well as from the private sector regarding energy efficiency and renewable energy issues, particularly from the perspective of creating a non-distorted energy market;
- 2.1.3 Training on financing energy efficiency investment projects to create local expertise in preparing bankable proposals, including those procedures related to the implementation of Flexible Mechanisms in the Kyoto Protocol;
- 2.1.4 Creation of an Investment Project Pipeline. This is one of the main efforts to promote government and municipal authority incentives to investors, as well as public private partnership for the identification, development, financing and implementation of energy efficiency and renewables investment projects, including biomass energy projects, and coal mine

methane (CMM) projects in South-Eastern Europe (SEE) and Eastern Europe, Caucasus and Central Asia (EECCA) region;

- 2.1.5** Development of an enabling business environment featuring new financing mechanisms including emissions trading instruments.

Output 2.2: Development of a new public private partnership investment fund.

Activities: Promote opportunities for banks and commercial companies to invest in energy efficiency and renewable energy projects through the development of new public private partnership investment fund, mainly through provision of technical assistance to structure and prepare the investment fund under the leadership of a Lead Private Investor.

Immediate Objective 3: Develop and harmonize regional policies and standards to introduce the economic, institutional and regulatory reforms needed to support energy efficiency investments to reduce greenhouse gas emissions.

Output 3.1 Broad analysis of policy reforms needed to support energy efficiency investments.

Activities: Complete a study on policy reforms needed to promote energy efficiency and renewable energy investments and reduce fuel poverty. An analytical report will include identification of specific policy, regulatory and institutional ‘bottlenecks’ to energy efficiency and renewable energy market formation and analysis of how policy reforms could transform economically attractive investment projects into bankable projects. Case studies will provide examples of overcoming specific barriers to improving energy efficiency and use of renewable energy through policy reforms.

II. WORK METHODS

6. The EE21 project will be implemented within the UNECE under the auspices of the Committee on Sustainable Energy during three years beginning on 1 June 2009. The Committee on Sustainable Energy will review progress of the project and provide general guidance at its regular sessions.

7. A Steering Committee will be appointed by Governments of UNECE member States under the auspices of the Committee on Sustainable Energy to review progress and provide detailed guidance on the execution of the project. The Steering Committee will normally hold an annual session, but may meet more frequently if necessary. The Steering Committee will be composed of governmental delegates from National Participating Institutions, international organizations, commercial companies, banks and international financial institutions.

8. The execution of the project will be under the purview of the UNECE Executive Secretary. The Director of the UNECE Sustainable Energy Division will be responsible for the implementation of project activities while daily operations will be the responsibility of the Project Manager. The project will be implemented by the Project secretariat within the UNECE Sustainable Energy Division of the UNECE secretariat. The Project secretariat, at the level of activity foreseen for 2009-2012, will be staffed by one Senior UNECE staff member (P-5) half-time, two UNECE staff members (P-4), one UNECE Associate Expert (L-2) for eight months,

one Associate Programme Officer (L-2), one Regional Adviser on Energy (L-5) half-time, one Programme Assistant (G-5/G-6) half-time. One UNECE staff member, Economic Affairs Officer (P-4) will serve as Project Manager.

9. The work methods of the project implementation will include activities for all participating countries in its Steering Committee, Ad Hoc Group of Experts Meetings, conferences, seminars, workshops and through country-oriented and sub-regional projects and interdivisional cooperation activities (see Annexes I-VII).

10. At its nineteenth session on 28-29 May 2008, the Steering Committee of the EE21 Project delegated the Ad Hoc Group of Experts on Energy Efficiency Investments for Climate Change Mitigation to serve as the executive decision-making body for the Financing Energy Efficiency Investments for Climate Change Mitigation Project, a sub-regional project of EE 21 Project (ECE/ENERGY/WP.4/2008/3, para. 24 (h)).

11. For selected activities, the project will be implemented through contractors, consultants, and representatives of supporting institutions and interested donor countries in cooperation with experts from the countries with economies in transition, in particular, National Coordinators and National Participating Institutions. National Participating Institutions may be involved in implementing specific activities through grant agreements with UNECE. These organizations and individuals in cooperation with the secretariat will report progress to the annual session of the Steering Committee of the project, to the relevant Ad Hoc Groups of Experts and may be requested to report to the annual session of the Committee on Sustainable Energy.

III. PARTICIPATION AND PROCEDURES

12. The EE21 project will be implemented by:

- (a) The Committee on Sustainable Energy, which considers reports on the Project at its annual sessions.
- (b) UNECE Governments, which:
 - (i) appoint national participating institutions and national coordinators;
 - (ii) advise on policies, legislation, incentives, standards;
 - (iii) possibly host UNECE conferences, seminars or workshops;
 - (iv) contribute to project financing, including in-kind contributions;
 - (v) nominate participants to meetings organized in the framework of EE21 project and other UNECE meetings.
- (c) The Steering Committee of EE21 project, which reviews progress and provides guidance on the execution of the project, meeting at least once each year for the duration of the Project. The Steering Committee determines the activities, results, work methods, participation and procedures, budget, calendar of events and timetable of the Project, and secures cooperation with other UNECE Sectoral Committees, in particular, the Committee on Environmental Policy. The Chairman of the Steering Committee reports on the progress and activities of the Project to the Committee on Sustainable Energy. The Steering Committee is composed of:

- (i) Government representatives and/or representatives of national participating institutions;
 - (ii) interested intergovernmental organisations which will be invited to participate according to UNECE practice;
 - (iii) representatives of the European Union (EU), European Commission, United Nations Development Programme (UNDP), United Nations Environment Programme (UNEP), Global Environment Facility (GEF), United Nations Industrial Development Organization (UNIDO), International Energy Agency (IEA/OECD), World Bank, European Bank for Reconstruction and Development (EBRD), Energy Charter Secretariat, European Business Congress (EBC) and other international organizations concerned with cooperation in energy efficiency and environmental matters.
- (d) National Participating Institutions, which:
- (i) suggest venues for training courses, negotiations and project meetings;
 - (ii) with the endorsement of National Coordinators, serve as Lead Institutions for specific activities of the EE21 Project;
 - (iii) nominate experts for preparation of technical papers, participants and rapporteurs for UNECE conferences, seminars and workshops and Project events;
 - (iv) nominate experts to take part in Project analyses;
 - (v) provide information to the Project secretariat on the activities carried out to produce reports and publications;
 - (vi) disseminate Project information nationally;
 - (vii) provide liaison between local organizers and experts and the Project secretariat.
- (e) The United Nations Economic Commission for Europe, which reviews progress of the Project at its bi-annual sessions.
- (f) The Project secretariat, which:
- (i) plans the detailed operations of the Project;
 - (ii) coordinates activities with national participating institutions, local organizers, contractors, consultants, national experts, and other international organizations, and in particular, the UNEP/GEF, United Nations Foundation, United Nations Fund for International Partnerships, Regional Cooperation Council, European Commission and the Commonwealth of Independent States;
 - (iii) organizes UNECE conferences, seminars and workshops and produces reports and publications;
 - (iv) services the meetings of the Steering Committee of the EE21 project.
- (g) Contractors, consultants, and representatives of supporting institutions and interested donor countries in cooperation with experts from the countries with economies in transition. These organizations and individuals in cooperation with the secretariat report progress to the annual sessions of the Steering Committee of the project.

IV. BUDGET AND TRUST FUND

13. The EE21 project will be financed by a United Nations trust fund or by support to its sub-projects (see Annexes I to VII). Participating UNECE Governments, as well as international organizations and private companies can support the overall EE21 project directly in three ways through:

- (a) in-kind contributions for:
 - (i) supporting the project activities of the national participating institutions;
 - (ii) providing experts to work as consultants to the project secretariat on a non-reimbursable basis;
 - (iii) organizing and hosting meetings;
 - (iv) preparing technical and economic reports, statistics, energy data and other information related to project activities;
- (b) providing experts and consultants to the project secretariat to work in Geneva;
- (c) co-financing the project by direct cash contributions to the trust fund.

14. For planning purposes contributions should be envisaged on an annual basis over the three-year period of the project.

15. Contributions to the Trust Fund are subject to a 13 per cent charge for programme support unless otherwise agreed through the United Nations Office for Project Services (UNOPS). They are subject to audit by the United Nations Board of External Auditors and the Internal Audit Division of the United Nations. Additional or special audit arrangements cannot be made. Engagement of personnel and procurement of supplies or equipment financed from trust funds are subject to the regulations, rules, policies and procedures of the Organization.

16. The sub-regional and country-oriented sub-projects and interdivisional cooperation activities implemented within the framework of the EE21 Project have their own budgets, cost plans and funding.

ANNEX I
SUB-REGIONAL PROJECT OF ENERGY EFFICIENCY 21

| | |
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| Project title: | Financing Energy Efficiency and Renewable Energy Investments for Climate Change Mitigation |
| Countries: | Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, the former Yugoslav Republic of Macedonia, Kazakhstan, Republic of Moldova, Romania, Russian Federation, Serbia, and Ukraine |
| Duration: | 48 Months |
| National Implementing Agencies: | Municipal authorities, Ministries of Energy, Ministries of Environment, energy conservation agencies, National Participating Institutions |
| Executing Agency: | United Nations Economic Commission for Europe |
| UN Cooperating Agencies: | United Nations Environment Programme (UNEP) |
| Starting Date: | January 2008 |
| Government Inputs: | (in-kind) \$ 25,000 annual contribution of each participating country |
| Supporting Institutions: | \$2.5 million from the Fonds Français pour Environnement Mondial (FFEM), \$3 million from United Nations Environment Programme (UNEP)/ Global Environment Facility (GEF), \$0.25 million from European Business Congress (EBC), and \$2 million matching funds from United Nations Foundation (UNF)/ United Nations Fund for International Partnerships (UNFIP) |
| UNECE Inputs: | (in-kind) \$2 million |
| Total Cost of the project: | \$10.95 million |

Brief Description: The project is to assist South-Eastern Europe (SEE) and Eastern Europe, Caucasus and Central Asia (EECCA) countries to enhance their energy efficiency, diminish fuel poverty arising from economic transition and meet international environmental treaty obligations under the United Nations Framework Convention on Climate Change (UNFCCC) and the UNECE. It is to accelerate and extend the impact of an earlier UNF supported project (ECE-CIS-99-043) that successfully leveraged \$15 million of financing for energy efficiency investments in Eastern European hospitals, municipal lighting and district heating systems. It will support the creation of a dedicated investment fund and will provide a pipeline of new and existing projects to dedicated public private partnership investment funds that can provide up to \$250 million of mezzanine and/or equity financing to project sponsors. It will establish an expanded and enhanced network of energy efficiency managers for value-added information transfers on policy reforms, financing and energy management. The project will (a) develop the skills of the private and public sectors at the local level to identify, develop and implement energy efficiency and renewable energy investment projects; (b) provide assistance to municipal authorities and national governments to introduce economic, institutional and regulatory reforms needed to support these investments; and (c) promote opportunities for banks and commercial companies to invest in energy efficiency and renewable energy projects through the development of new public private partnership investment fund.

The establishment of a public private partnership investment fund will be done in four steps:

- (a) Structure and prepare the investment fund under the leadership of a Lead Private Investor including establishing the investment objectives, investment structures, commercial success criteria, sub-projects eligibility criteria, conditions, exclusions and restrictions, hurdle rate, expected returns, exit strategy, coverage by sector and geographical coverage, potential fund size, market, management structure and costs, etc.
- (b) Analyse the financial, legal and fiscal issues including the capital structure and all necessary legal arrangements with investors;
- (c) Solicit public sector entities from both the participating countries and other countries as well as private sector investor participation, on the basis of an investment memorandum to be prepared as part of the activity and;
- (d) Select an experienced fund manager through internationally approved procurement procedures.

To facilitate establishment of an investment fund, the following major activities have been accomplished since the beginning of the project:

- (a) Assessment missions to participating countries have been conducted, and Investor Interest and Capacity Building Needs report prepared as their outcome;
- (b) Three contractors have been selected following an international competitive bid tender process:
 - (i). Conning Asset Management Limited, United Kingdom as the Investment Fund Designer;
 - (ii). Pöyry Energy Consulting AG, Switzerland to undertake Regional Analysis of Policy Reforms to Promote Energy Efficiency and Renewable Energy Investments; and
 - (iii). The Centre for Energy Efficiency EnEffect, Bulgaria has been selected to undertake the Development of a Website and Internet Communications Network of Energy Efficiency Managers in Eastern Europe;
- (c) National Participating Institutions have been awarded grants to develop national project websites, provide national policy information for the regional analysis of policy reforms, and develop national case studies on overcoming barriers to energy efficiency investments.

ANNEX II
SUB-REGIONAL PROJECT OF ENERGY EFFICIENCY 21

Project title: **The Regional Network for Efficient Use of Energy and Water Resources in Southeast Europe (RENEUER)**
Country: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Montenegro, Republic of Moldova, Romania, Serbia, and the former Yugoslav Republic of Macedonia

Brief Description: The Regional Network for Efficient Use of Energy and Water Resources in Southeast Europe (RENEUER) was founded at the end of 1999 at the initiative of representatives of several countries from the region. It is a tool for promotion of sustainable development of municipalities and regions through rational use of energy and water resources. Within a short time all countries participating in Southeast European Co-operative Initiative (SECI) and the Stability Pact (now Regional Cooperation Council (RCC)) joined the Network of the project. This is a typical “bottom up” initiative aimed at facilitating and promoting sustainable development of the municipalities and regions in Southeast Europe through initiatives for efficient use of energy and water resources.

RENEUER focuses its activities as follows:

Objective 1: Accelerate regional networking by enhanced Internet communications to provide value added information on project finance and the Kyoto Protocol mechanisms.

Two major outputs are planned:

- (a) Further development and maintenance of the restructured and updated RENEUER Clearinghouse (www.reneuer.com).
- (b) Introduction of advanced training tools for on-line training on local (municipal) energy planning and management to strengthening the capacity of local managers and specialists.

Objective 2: Promote Energy Efficiency Investments on the local (municipal) level, developing skills and capacities.

The following outcomes are envisaged:

- (a) Collect and disseminate information about successfully implemented financial schemes and mechanisms that may serve as good examples for SEE municipalities;
- (b) Provide distance training of municipal managers and specialists via RENEUER Clearinghouse on the implementation of innovative financial instruments for energy efficiency and climate change projects.

Objective 3: Develop regional policies to support energy efficiency investments and the Kyoto Protocol mechanisms.

Activities will aim at building a unique coalition of people and institutions who support the reforms in the energy sector. They will be focused on the dissemination of lessons learned and project outcomes via RENEUER Clearinghouse. Thus RENEUER will turn into a reliable and effective policy instrument for the countries of the region, which could be well integrated into the EU process “Better Integration through Specific Exchange for Sustainable Energy” (BISE), thus accelerating the European integration processes in the countries of the region.

For implementation of these objectives with the critical support of the UNECE EE21 project various initiatives and projects are being prepared and introduced to donors for potential financing.

ANNEX III
COUNTRY-ORIENTED PROJECT OF ENERGY EFFICIENCY 21

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| Project title: | Removing Barriers to Energy Efficiency Improvements in the State Sector in Belarus |
| Country: | Belarus |
| Duration: | 48 Months |
| Implementing Agency: | United Nations Development Programme |
| Executing Agency: | Belarus Committee on Energy Efficiency |
| Cooperating Agency: | United Nations Economic Commission for Europe |
| Starting Date: | June 2006 |
| GEF Grant: | \$1.4 million |
| Government Inputs: | \$8.27 million (including \$150,000 in-kind) |
| UNECE Inputs: | (in-kind) \$ 100,000 |
| Total Cost of the project: | \$9.77 million |

Brief Description: The goal of the project is to reduce greenhouse gas emissions directly by approximately 1.14 million tons of CO₂ equivalent over 15 years by catalyzing current investments in energy efficiency in the state sector of Belarus. The project will target municipalities and state and communal enterprises in the district heating and combined heat and power sectors. The main objective of the project is to increase internal investments in energy efficiency projects in the state sector with the assistance of the Energy Centre created in the process of project implementation. Specific objectives include the following: (1) Strengthen institutional capacity to support energy saving in the state sector; (2) Establish a track record for investments in sustainable energy efficiency projects in the state sector; (3) Develop straightforward financial “starter” mechanisms in a challenging investment climate to promote investments in the state sector; and (4) Overcome negative perceptions of incentives for energy saving in the state sector and provide local authorities and state enterprises with much-needed market information and training. In order to strengthen institutional capacity to support energy saving in the state sector, the project will establish an energy efficiency organization, the Energy Centre, which will provide consulting services in energy efficiency to state organizations. Related project activities will include creation of the centre as a legal entity, selection of its staff, and training for its staff provided by international consultants.

The project’s strategy addresses capacity and awareness issues amongst state enterprises and local authorities by building capacity to provide information and consulting services, and training to local authority and state enterprise employees in energy efficiency. The Project team will assess opportunities of local bank loans for energy efficiency investment projects. Expected outcomes of the project include the following: (1) Increased incentives for state (budget) organizations to invest in energy efficiency; (2) Financial resources available to the state sector for energy efficiency investments are used more efficiently; (3) Project successes throughout Belarus sustained and replicated.

ANNEX IV
SUB-REGIONAL PROJECT OF ENERGY EFFICIENCY 21

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| Project title: | Increasing Energy Efficiency for Secure Energy Supplies |
| Countries: | UNECE member states, with a particular emphasis on oil and gas producing, transporting and consuming countries |
| Duration: | 36 Months |
| National Implementing Agencies: | Ministries, companies, organizations and institutions from energy, industry and financial sectors of the participating countries |
| Executing Agency: | United Nations Economic Commission for Europe |
| Budget available: | \$150,000 |
| Starting Date: | September 2008 |

Objective: The goal of the project is to promote the development of energy efficiency investments projects designed to reduce the domestic consumption of hydrocarbons in the Russian Federation, Kazakhstan and other Central Asia energy exporters in order to release additional energy resources which could be used for either for domestic consumption or to increase oil and natural gas exports, which will enhance security of supply.

Brief Description: By improving their energy efficiency, the Russian Federation and Central Asian countries could reduce domestic energy consumption that would release energy resources which could enhance security of supply. At the same time, efficiency improvements could help raise industrial productivity, diminish fuel dependence and reduce environment air pollution as well as greenhouse gas emissions.

During the last fifteen years the UNECE Energy Efficiency 21 project has demonstrated that it is possible to identify, develop and finance energy efficiency investment projects in the Russian Federation, Eastern European and CIS countries. It has shown that cost-effective energy efficiency investments are the only self-financing method of reducing greenhouse gas emissions in the region. These projects could be made doubly attractive if energy efficiency investments were financed through foreign currency earnings derived from increased energy exports. In addition, many Russian and Central Asian experts know the technical solutions needed to improve energy efficiency in their municipalities, power stations or factories but they do not know how to formulate investment projects that meet bank rules, standards and criteria. Some governments in the region have not implemented the energy policy, regulatory and institutional reforms needed to improve energy efficiency.

Expected Accomplishments

- (a) Increased skills for local experts to identify, develop and finance investment project proposals for financing to the Eastern European Energy Efficiency Investment Fund and other sources of equity or project finance;
- (b) Improved capacity to analyse and finance investments from the revenues of increased hydrocarbon exports derived from efficiency improvements.

Main Activities

- (a) Establish a network of government and industrial experts from energy importing countries and exporting countries for identifying and developing energy efficiency improvements in the production, transportation and use of natural gas and petroleum
- (b) Develop the technical criteria, information requirements and standard format for the identification and selection of energy efficiency investment project proposals
- (c) Review and evaluate the investment climate, energy policy and local agreements (property ownership, off-take agreements) needed to finance investment projects as loans and through equity financing
- (d) Develop new mechanisms (guarantees, contractual agreements) to finance efficiency improvements from the greater availabilities of natural gas and petroleum for use in domestic and export markets

Budget: The project budget for the whole implementation cycle 2008-2010 is \$ 150,000. Co-financing for the project will be explored with the supporting institutions of government departments, international organizations and public and private sector companies currently financing UNECE projects on energy security and energy efficiency. Support from 'in-kind' contributions is expected from related UNECE intergovernmental bodies notably the Committee on Sustainable Energy intergovernmental expert dialogue on energy security, the Energy Efficiency 21 Project and the Working Party on Gas. The UNECE will provide an 'in-kind' contribution of project counterparts in staff time, documents preparation and distribution, publications and conference services.

ANNEX V
SUB-REGIONAL PROJECT OF ENERGY EFFICIENCY 21

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| Project title: | Development of the Renewable Energy Sector in the Russian Federation and in CIS Countries: Prospects for Interregional Cooperation |
| Countries: | UNECE member states, with a particular emphasis on the Russian Federation and other CIS countries |
| Duration: | 36 Months |
| National Implementing Agencies: | Ministries of Energy and Natural Resources, Ministries of Environment, Ministries of Economy and other related organizations and institutions |
| Executing Agency: | United Nations Economic Commission for Europe |
| Budget available: | \$150,000 |
| Starting Date: | September 2008 |

Objective: The goal of the project is to promote interregional cooperation to overcome energy policy, regulatory, institutional and financial barriers to the development of renewable energy resources in the Russian Federation and countries of the Commonwealth of Independent States (CIS).

Brief Description: The Russian Federation and the CIS countries are endowed with very significant renewable energy resources. The current contribution of solar, tide, wind, hydro, geothermal, hydro and bio-fuels is less than 5 per cent of total primary energy consumption. But they have a large, diverse and unrealised potential that could have important benefits for the environment, energy security and the economy if a wide range of barriers to the deployment of renewable energy technologies can be overcome resulting in a more favourable investment climate. Interregional cooperation can contribute greatly to overcoming these obstacles since many of the opportunities and constraints for the future development of renewable energy resources are common between the CIS member states.

The size and geographical diversity of the CIS countries provides natural advantages for exploiting renewable energy resources. The compatible electric power systems throughout the CIS allows for the transfer of power across the region. It would provide for the location of renewable energy projects such as wind farms in remote resource rich areas and transmitting electric power to population centres. For example, the European Bank (EBRD) estimates that the Russian Federation has an excellent potential for wind power generation. One quarter of its total potential would provide some 175,000 MW of power from sites along seacoasts, the steppes and mountains. Despite this potential, the CIS represents less than one per cent of global installed wind power according to the UNDP World Energy Assessment.

The prospects for other renewable are also very promising. The hydro potential in the Russian Federation alone represents 9 per cent of world hydro resources. This represents some 21 per cent of total electric power generating capacity in the Russian Federation. The potential for geothermal energy in Russia is also very high rated at more than 3000 MWe while geothermal

accounts for some 200 MWe at present ranking Russia among the highest users of this energy source.

A number of renewable energy technologies are considered to be competitive now to provide electric power to national grid systems according to the International Energy Agency including hydro, biomass, geothermal and large scale wind. At the same time, more than 10 million people in CIS countries are not connected to electric power grids and currently use small scale gasoline or diesel generators which are expensive and unreliable. Off-grid electricity could be reasonably provided with wind-diesel systems, biomass-fired steam boilers and small hydro.

Despite this potential, the deployment of renewable energy technologies is hindered by, inter alia, lack of political, legislative and regulatory support; energy prices that do not reflect the costs of production; low electric power and heat tariffs; lack of information for decision makers; and a preference for centralized energy supplies that all contribute to an inadequate investment climate for renewable energy technologies.

Expected Accomplishments

- (a) Increased capacity of national and regional experts to identify and adopt measures to overcome barriers to the development of renewable energy resources;
- (b) An enhanced investment climate for deployment of renewable energy technologies in the Russian Federation and CIS countries.

Main Activities

- (a) Establish a network of national and regional experts responsible for promoting renewable energy technologies in the Russian Federation and interested CIS countries;
- (b) Analyse the energy policy, regulatory, institutional and financial barriers to the development of renewable energy resources in participating countries;
- (c) Identify, compare and contrast measures adopted in participating countries to overcome barriers to the deployment of renewable energy technologies;
- (d) Prepare a strategy to promote an enhanced investment climate for renewable energy technologies for dissemination to national and regional authorities in participating countries.

Budget: The project budget for the whole implementation cycle 2008-2010 is \$ 150,000. Co-financing for the project will be explored with the supporting institutions of government departments, international organizations and public and private sector companies currently financing UNECE projects on energy security and energy efficiency. It is expected, that 'in-kind' contribution may come from related UNECE intergovernmental bodies, notably the Committee on Sustainable Energy and the Energy Efficiency 21 Project. The UNECE will provide an 'in-kind' contribution of project counterparts in staff time, documents preparation and distribution, publications and conference services.

ANNEX VI

INTER-REGIONAL PROJECT OF ENERGY EFFICIENCY 21

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| Project title: | Global Energy Efficiency 21: Cooperation between the United Nations Regional Commissions on Energy Efficiency for Climate Change Mitigation (GEE21) |
| Countries: | Member countries of the five UN Regional Commissions: United Nations Economic Commission for Europe (UNECE), UN Economic and Social Commission for Asia and the Pacific (ESCAP), UN Economic and Social Commission for Western Asia (ESCWA), UN Economic Commission for Africa (ECA) and the UN Economic Commission for Latin America and the Caribbean (ECLAC) |
| Duration: | 36 Months |
| National Implementing Agencies: | Ministries of Energy and Natural Resources, Ministries of Environment, Ministries of Economy, financial institutions and banking sector representatives from the participating countries |
| Executing Agency: | United Nations Economic Commission for Europe |
| Starting Date: | September 2008 |
| Budget available: | \$150,000 |

Objective: The goal of the project is to develop a more systematic exchange of experience on capacity building, policy reforms and investment project finance among countries of the other regions of the world through their UN Regional Commissions in order to promote self-financing energy efficiency improvements that raise economic productivity, diminish fuel poverty and reduce environment air pollution such as greenhouse gas emissions.

Brief Description: A global consensus seems to be emerging that energy efficiency is the most effective method of mitigating climate change. This is because there is a vast potential for efficiency improvements to reduce CO₂ emissions which can be implemented very quickly, cheaply and reliably. This consensus can be seen in a number of recent statements and declarations of senior government officials.

The Joint Statement of the Heiligendamm G8 Summit meeting held in June 2007 was issued on building the framework conditions for a globalized and competitive economy following discussions between the G8 leaders and the heads of State of Brazil, China, India, Mexico and South Africa. The leaders confirmed their commitment to promote energy efficiency as an important step towards secure, stable and competitive energy supplies for achieving sustainable development.

The G8 Statement reflects the vision of the EU Plan of Action on Energy Efficiency adopted in October 2006 with the approval of all EU member countries. The European Commission Draft Declaration on an International Partnership for Energy Efficiency Cooperation combines the commitments Heads of State on energy efficiency from the G8 Statement and EU Plan of Action apparently also with the approval of the United States and Japan.

At the global level within the United Nations, Millennium Development Goal 7 on ensuring environmental sustainability under MDG Target 9 is designed to integrate the principles of sustainable development into country policies and programme and reverse the loss of environmental resources. This is to be measured with MDG Indicator 28 aimed at reducing carbon dioxide emissions per capita. This supports the global UN Framework Convention on Climate Change (UNFCCC) process.

Within the UNECE Region, Environment Ministers, at the 'Environment for Europe' conference in Belgrade in 2007, specifically welcomed the UNECE project on Financing Energy Efficiency Investments for Climate Change Mitigation agreeing to consider participation as public-sector investors in its energy efficiency investment fund. The project has been developed with significant extra-budgetary support of the United Nations Foundation, the French Global Environment Facility and the UNEP / Global Environment Facility. It is designed to promote the formation of a market for energy efficiency in 12 eastern European, south-eastern European and Central Asian countries to reduce greenhouse gas emissions. It is designed to provide a) capacity building for the development of energy efficiency investment projects, b) assist participating governments with the introduction of energy policy reforms and c) provide finance for bankable projects that reduce CO₂ emissions through a public-private partnership equity fund managed by external professional fund managers.

In its Proposed UN System Wide Approach to Climate Change, the United Nations System Chief Executives Board (CEB) found that the UN system provides an extensive range of capacity building activities. It noted though that access to services is often limited by a lack of awareness of what is on offer, which agencies provide relevant services and what a country needs to do to receive support. It concluded that the UN system should develop a central hub or regional hubs of information and capacity building services offered by UN bodies that would serve as a capacity building gateway in particular aimed at developing countries.

The present project is designed to explore how the valuable experience of the UNECE energy efficiency projects can be applied with UNECE assistance to the other Regional Commissions especially to ESCAP which shares common member states with UNECE. The energy and climate change mitigation activities of the other Regional Commissions will need to be appraised to determine how they could respond fully to the transfer, adoption and local adaptation of the activities such as those under the UNECE energy efficiency work programme.

Expected Accomplishments

- (a) Increased capacity of the UN Regional Commissions to provide effective energy efficiency services that promote the reduction of greenhouse gas emissions to member states;
- (b) Improved capacity to develop, adjust and implement a global strategy to promote self-financing energy efficiency improvements.

Main Activities

- (a) Establish a network of elected officers of intergovernmental bodies working on energy efficiency and climate change and the respective secretariats of the five United Nations Regional Commissions;
- (b) Appraise the energy efficiency and climate change work programmes with respect to activities capacity building, energy policy reforms and investment project finance;
- (c) Determine common priorities and synergies between the member states and the work programmes they pursue through their UN intergovernmental bodies among the five UN Regional Commissions;
- (d) Develop a global strategy for the adoption UN Regional Commission work programmes to promote self-financing energy efficiency improvements to raise economic productivity, diminish fuel poverty and reduce environment air pollution as well as greenhouse gas emissions.

Budget: The project budget for the whole implementation cycle 2008-2010 is \$150,000. Co-financing for the project will be explored with the supporting institutions of government departments, international organizations and public and private sector companies currently financing UNECE projects on energy security and energy efficiency. It is expected, that 'in-kind' contribution may come from related UNECE intergovernmental bodies notably the Committee on Sustainable Energy and the Energy Efficiency 21 Project. The UNECE will provide an 'in-kind' contribution of project counterparts in staff time, documents preparation and distribution, publications and conference services.

ANNEX VII

INTERDIVISIONAL COOPERATION ACTIVITIES OF ENERGY EFFICIENCY 21

A. Energy Efficiency in Housing

Project title: UNECE Action Plan for Energy Efficiency in Housing
Countries: UNECE member States
Duration: 24 Months
Estimated budget: €75,000
Executing Agency: UNECE Committee on Housing and Land Management (CHLM)

General objective: To assist UNECE governments to improve energy efficiency in the housing sector and enhance energy performance of buildings.

Background: As part of its programme of work, the Committee on Housing and Land Management is addressing the issue of energy efficiency in housing. In particular the Committee is identifying and addressing political, institutional, financial, technological and institutional gaps in the UNECE region. The CHLM has undertaken an in depth-analysis of the situation of energy efficiency in housing in the region and identified the main areas requiring intervention and action as well as investigated identified existing replicable projects. In order to facilitate exchange of information and discuss policy advice the CHLM is organizing two workshops on energy efficiency in housing: in Sofia, Bulgaria, on 21-22 April 2009 and in Vienna, Austria in November 2009. The first workshop focuses on opportunities and constraints in the sector, with a view to bridging the gaps between decision making and practice. The second one will focus on recommendations to policy and decision-makers. As common thread, the meetings will develop guidance that should lead governments to enhance energy efficiency in the housing sector, also through national plans.

Brief Description: As part of this effort to assist governments to improve the performance of buildings, the drafting of an action plan for energy efficiency in the UNECE region would represent an important capacity building tool. Activities, actions and solutions proposed by the plan could be mainstreamed into national and local strategies, and thus provide an important blueprint for energy efficiency in housing in the region. The Action Plan would: a) provide a list of gaps and constraints preventing countries from increasing the energy performance of buildings; b) identify possible solutions to overcome those constraints, also based on existing examples; c) identify the main actors that should be involved in the corrective action d) identify the main steps for the corrective action e) identify related challenges and risks; f) identify potential partners that could assist in the implementation of the solution. The Action Plan is expected to be a practical tool for decision makers, and as such should be developed by policy-makers of member States in cooperation with the Secretariat, possibly through a number of consultations and dedicated workshops.

B. Wood Energy

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| Activity (project) title: | Modern and sustainable heat and power from woody biomass in South-Eastern Europe |
| Countries: | Countries in the western Balkans |
| Duration: | 24 Months |
| Estimated Budget: | €450,000 |
| Executing Agency: | UNECE/FAO Timber Section, Geneva |
| Starting Date: | September 2008 |

Objective: The goal of the project is to demonstrate the feasibility of converting municipal heat and power systems in the western Balkans to woody biomass from local renewable sources by raising awareness at the policy level and by preparing detailed project proposals for one or two municipalities in each of the participating countries.

Brief Description: The western Balkans have a valuable and expanding forest resource, which could provide significant volumes of renewable energy. However, most citizens, even in rural areas, are dependent on imported fossil fuels. One solution is to convert district heat and energy systems of municipalities in forested areas to modern wood burning.

When used in an energy and material efficient way, using a modern burning facility, drawing on wood from sustainably managed forests, wood energy is considered as almost climate neutral. In addition to the energy efficiency, increased energy security and lower fuel costs, especially when the municipality is also the forest owner, these projects could generate additional income from credits for avoided CO₂ emissions and create additional local employment.

Woody biomass is one of the most important renewable energy sources in the UNECE region and may see strong growth in coming years. However, wood energy is often negatively perceived as the fuel of the poor because of its labour intensity, often old-fashioned burning facilities and the connected indoor and outdoor air pollution by small particles emissions. Modern burning facilities can effectively convert woody biomass to energy whilst minimizing particle emissions.

Many cities and municipalities already possess central heating networks requiring refurbishment, which could be converted relatively cheaply to woody biomass. Furthermore, the municipalities often own (or have guaranteed access to) abundant local wood resources.

Next Steps

- (a) Set up a network of interested municipalities in the countries of the region;
- (b) Organize reconnaissance expert missions to the pilot areas to assess the market for woody energy, to collect positive examples for wood energy projects implementation and to prepare regional feasibility reports including business case relevant data;
- (c) Organize a sub-regional workshop for policy-makers representing energy and forestry areas from target countries to raise awareness and to showcase examples where heat and power providers successfully switched to woody biomass;

- (d) Prepare project proposals to convert municipalities (one or two per participating country) from heat and power systems based on fossil fuels to systems based on sustainable woody biomass;
- (e) Organize a final conference to present pilot project proposals and lessons learned to the policy-makers and potential investors.

Following the proposal of the UNECE/FAO Timber Section, the nineteenth session of the Steering Committee of the EE21 Project held in May 2008 “requested the secretariat, in cooperation with the UNECE/FAO Timber Section, to develop a subregional project of Energy Efficiency 21 addressing wood energy and other bio-fuels with a geographic focus on the western Balkans” (ECE/ENERGY/WP.4/2008/3, para. 24 (i)).

The Timber Section sees strong synergies in bundling the common efforts in close cooperation between the different sectors (energy, forestry, investment) and levels (international, national, communal/local). It would involve partners from both energy and forest agencies to develop and implement this project. Cooperating partners of the EE21 Project networks are requested to consider funding of this project.
