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**ECONOMIC COMMISSION FOR EUROPE**

**COMMITTEE ON SUSTAINABLE ENERGY**

Steering Committee of the Energy Efficiency 21 Project

Twentieth session  
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Item 6 (a) of the provisional agenda

**CURRENT STATUS OF SUBREGIONAL AND COUNTRY-ORIENTED PROJECTS  
UNDER THE UMBRELLA OF THE ENERGY EFFICIENCY 21 PROJECT**

**Financing Energy Efficiency Investments for Climate Change Mitigation**

Energy Efficiency Business Development Course Programme

Note by the secretariat

**I. INTRODUCTION**

1. The project on Financing Energy Efficiency Investments for Climate Change Mitigation is intended to promote market formation so that self-sustaining energy efficiency and renewable energy projects can be identified, developed, financed and implemented locally in participating countries: Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Kazakhstan, Republic of Moldova, Romania, Russian Federation, Serbia, the former Yugoslav Republic of Macedonia and Ukraine. The project has the following three objectives:

- (a) Objective One: Identify and develop investment projects;
- (b) Objective Two: Strengthen energy efficiency and renewable energy policies;
- (c) Objective Three: Promote opportunities for commercial banks and companies to invest.

2. Under Objective One the project aims at training experts in project development, finance and business planning in the twelve participating countries. In order to do this, the Ad Hoc Group of Experts on Energy Efficiency Investments for Climate Change Mitigation, at its

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eleventh session in May 2008, “welcomed the expert missions to be undertaken to the capital of each participating country for consultations on the investment fund with relevant government authorities and financing institutions to assess the local financial environment, appraise investment project development capacities and analyse the conditions under which an investment fund could operate in each country” (ECE/ENERGY/WP.4/GE.1/2008/6, para 17 (e)).

3. The aim of assessment missions was to determine the local capacity and training needs of local experts to prepare investment projects, to appraise their knowledge of equity participation in projects, third party finance capacities, energy service companies (ESCOs), and performance contracting. In particular, the assessment was intended to determine whether experts identified by the National Participating Institution in each country have the following skills:

- (a) Financial engineering and business planning skills to identify, select and develop energy efficiency and renewable energy investment projects and prepare bankable project proposals;
- (b) Business development skills to prepare the equity and/or mezzanine finance participation of an investment fund in local companies, manufacturers of energy efficient technology, energy service company; to structure and launch a third party finance company using performance contracting; and to prepare the equity participation in renewable energy projects;
- (c) Full range of skills described above and the capacity to develop an indicative project pipeline to a standard project identification format.

4. The present note sets out the key elements of an energy efficiency business development course programme based on an appraisal of the level of local skills in participating countries. It describes the recommended content, structure, timetable of classroom instruction, type of homework assignments, and the content of course materials for the capacity building courses.

## **II. ASSESSMENT OF LOCAL SKILLS**

5. The international experts participating in the assessment missions agreed that there was no need for separate training on equity and mezzanine finance, as it is only one possible financial scheme of the overall financial package, along with senior debt and other possibilities that exist for a good bankable project proposal. Furthermore, the in-depth work of structuring the mezzanine is more likely to be done in collaboration with the fund managers than by the project proponent alone. Therefore the training programme should present the comparative possibilities, constraints and advantages of different financial schemes, including equity and mezzanine finance.

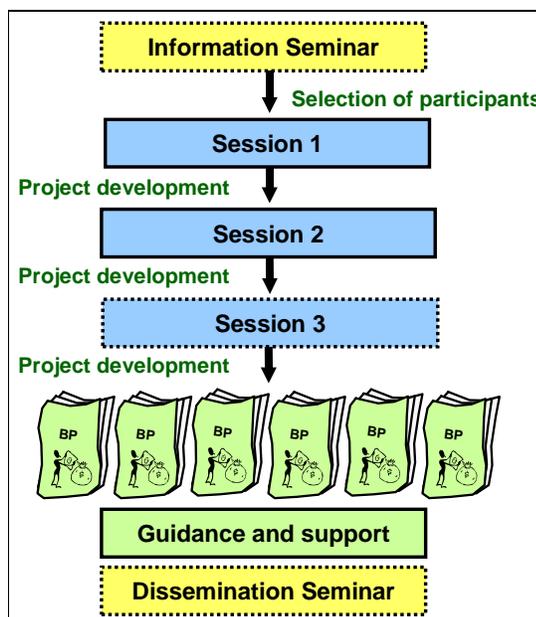
6. Prior to starting the interactive Financial Engineering/Business Planning (FE/BP) Programme, it is recommended that an Information Seminar be arranged for top management and decision-makers in companies, facilities and utilities with potential investment projects for energy efficiency (EE) and renewable energy (RE) (projects that could be developed during the FE/BP Programme), government representatives, project developers, National Coordinators (NCs) and National Participating Institutions (NPIs). The main purpose of this seminar would be awareness raising and promotion of the subsequent FE/BP training programme.

7. Furthermore, arranging additional seminars for policymakers in some of the participating countries would facilitate faster market formation and more efficient implementation of EE and RE projects.

### III. FINANCING ENGINEERING / BUSINESS PLANNING COURSE PROGRAMME

8. The capacity building programme should be interactive combining classroom lectures, instructions, discussions and consultations with development and preparation of bankable project proposals (first version of Business Plan) as homework between and after the classroom sessions (“learning by doing”).

Figure 1: The capacity building programme



9. It is also possible to organize the capacity building programme without the information seminar. This will require additional efforts of the NCs and NPIs to market the programme, and identify and select the right participants.

10. Based on predefined and announced criteria, participants will be invited to the interactive capacity building programme, bringing suitable projects for which they will develop bankable project proposals.

11. Projects to be developed could either be of the type suitable for a pipeline of projects financed by an ESCO or a larger EE or RE project. For the latter type of projects, the in-depth work of structuring mezzanine financing is more likely to be done in collaboration with the fund manager (after the capacity building programme).

12. A dissemination seminar would be instrumental in furthering an increase awareness and promote the developed projects. In addition to the participants in the interactive capacity building programme, the target group would include top management and decision-makers in companies, facilities and utilities with potential investment projects for energy efficiency and renewable energy, government representatives, financial institutions, project developers, NCs and NPIs. The main purpose of the dissemination seminar would be to raise awareness through showing outcomes of the training sessions: presentation of business plans developed in the course of the programme demonstrating various ways of project financing and presentation of the new EE investment fund and other relevant financing facilities. The dissemination seminar would also give project developers an opportunity to receive feed-back on their business plans from the financial institutions that would be invited.

13. The dissemination seminar could be arranged together with the third training session, or as a separate event several weeks after the last training session to ensure that the business plans are completed. By organizing the dissemination seminar later, the EE investment fund and/or other financial institutions will have time to analyse the developed business plans and provide valuable comments and recommendations at the seminar. It might be useful to organize a regional dissemination seminar for participants from several countries if the schedule of the training sessions permits.

14. Additional guidance and support may be needed for the most promising projects to secure project financing. This could include further consultation on how equity or mezzanine financing from the investment fund could be utilized.

15. With a thorough preparation and selection process and good remote expert consultations, two classroom sessions could be enough. However, three sessions are recommended to ensure well prepared bankable projects.

#### IV. PROGRAMME OUTLINE

16. The purpose of the programme is to contribute to increased awareness, knowledge and skills in preparation of bankable investment projects for energy efficiency and renewable energy.

17. The first target group for the programme is local project developers, experts (e.g. ESCO staff) and managers representing project owners and utilities. The second target group is top management and decision-makers in companies, facilities and utilities with potential investment projects for energy efficiency and renewable energy, government representatives and NCs and NPIs.

Table 1: Expected output of one programme

Description	Indicators
Local top management/decision-makers, government representatives and NCs and NPIs informed about the requirements for bankable project proposals to be presented to financial institutions	Fifty local top management/decision-makers, government representatives, and NCs and NPIs participated in the information seminar (and fifty in the dissemination seminar, if arranged)

Description	Indicators
Local consultants/experts and managers trained to identify and develop investment projects	Twenty local consultants/experts and managers completed the capacity building programme
Draft pre-feasibility studies (first version of business plans) ready for presentation to financial institutions	Eight pre-feasibility studies (first version of business plans) completed
Further guidance and support provided to suitable projects	Financial institutions confirmed interest in discussing financing with three projects

18. The programme would include the following main activities:
- (a) Preparations, including invitations to information seminar;
  - (b) Organization of information seminar;
  - (c) Selection of participants for the interactive capacity building programme (three sessions);
  - (d) Preparation of session one;
  - (e) Implementation of session one;
  - (f) Follow-up to session one, evaluation of draft business plan and preparation of session two;
  - (g) Implementation of session two;
  - (h) Follow-up to session two, evaluation of draft business plan and preparation of session three;
  - (i) Implementation of session three;
  - (j) Follow-up to session three, evaluation of draft business plan;
  - (k) Preparation of dissemination seminar;
  - (l) Arrangement of dissemination seminar;
  - (m) Providing guidance and support to further develop selected projects.
19. During the three classroom sessions, two days each, international trainers would give lectures, organize exercises and hold individual consultations with each team developing pre-feasibility study/business plans for specific projects. A pre-feasibility study/business plan template with the following contents would be presented, and the participants trained in how to develop and present each of the chapters:
- (a) Executive summary;
  - (b) Borrower;
  - (c) Project information;
  - (d) Environmental benefits;
  - (e) Market;
  - (f) Financing plan;
  - (g) Financial projections;
  - (h) Project implementation.
20. The participants would be provided with the following training materials:
- (a) Pre-feasibility study/business plan template;
  - (b) Business planning manual (introduction/description of all chapters of the pre-feasibility study/business plan);

- (c) Exercises;
- (d) Software tools for economic and financial calculations (profitability, disbursement plan, repayment plan, cash flow, etc.) and for environmental calculation;
- (e) Criteria and requirements of the investment fund and other relevant financial institutions.

21. Between and after the sessions the participants continue the development of their pre-feasibility study/business plan based on the skills obtained and advice given at the previous session.

Table 2: Scheme of homework in the development of pre-feasibility study/business plan

Chapter	Homework 1	Homework 2	Homework 3
Executive Summary			√
Borrower	√	√	√
Project Information	√	√	√
Environmental Benefits	√	√	√
Market	√	√	√
Financing Plan		√	√
Financial Projections		√	√
Project Implementation		√	√

22. The programme can be implemented according to the schedule in table 3; milestones are indicated as months after its beginning (international trainers contracted beforehand):

Table 3: Schedule of the development of pre-feasibility study/business plan

No.	Milestones	Month
1	Planning completed, programme requirements clarified with NCs and NPIs	+1
2	Information Seminar completed	+3
3	Participants selected	+4
4	Classroom Session One completed	+4
5	Classroom Session Two completed	+6
6	Classroom Session Three completed	+7
7	Pre-feasibility Study/Business Plan completed	+8
8	Dissemination Seminar completed	+9
9	Guidance and support provided to selected projects	+12
10	Programme completion report submitted	+12

23. There should be 4-6 weeks between the sessions to ensure that the participants have sufficient time to develop their projects properly. The dissemination seminar could be organized together with the third training session.

## **V. SELECTION OF PARTICIPANTS**

24. NCs and NPIs would assist in identification and invitation of participants to the information seminar and the dissemination seminar.

25. The content of the capacity building programme would be announced at the information seminar. The criteria and requirements for suitable projects and for participation in the programme would include the following:

- (a) Project design has been prepared and technical and economic evaluations have been done (e.g. Energy Audit Report);
- (b) Sufficient equity is available for the project;
- (c) Ability of each participant to dedicate around 300 working hours to the programme, most of it related to homework between the sessions;
- (d) Commitment to complete the homework (business plan) in the agreed time, preferably in English (in exceptional cases a Russian version could be accepted) - agreement to be signed before the beginning of the programme.

26. All interested participants would need to complete and submit a project identification form to the NCs and NPIs. In addition, a participant profile (CV) will be requested.

## **VI. INFORMATION SEMINAR**

27. The one-day information seminar would aim to provide clear and concise information on the general requirements of the international financial institutions for an investment project. Adequate information on possible financial instruments could assist in utilization of new instruments, which might be used by the fund, such as mezzanine financing, taking equity in special purpose vehicles, or other non-recourse finance mechanisms. Furthermore, the goal of the information seminar would be to promote the subsequent capacity building programme and invite those interested to submit an application.

28. This would provide understanding and support on a managerial and decision-making level for the identification, selection and development of EE and RE investment projects and preparation of bankable project proposals. The agenda would also include a presentation of the new EE investment fund design and procedures, including:

- (a) The possibilities offered by the fund;
- (b) Difference from other existing schemes;
- (c) The impacts (on the banks' evaluation procedures, senior debt access, etc.) and the implications (on corporate governance, etc.) of a mezzanine scheme;
- (d) Financial and legal obligations.

The agenda for the Information Seminar would be tailored to each country.

## VII. CAPACITY BUILDING PROGRAMME

29. The main subjects to be presented at the classroom sessions are:

### Session 1

A. Programme introduction.

B. Presentation of participants.

C. Financial engineering and business planning: Introduction to the process of initiating and developing a business plan.

Decision-makers in banks have only a limited time to examine a proposed project before making their decision as to whether to proceed with the loan approval process. A badly presented or incomprehensible proposal stands the risk of being turned down without being fully examined. In order to overcome this problem, this seminar is designed to help potential project sponsors\* understand how to write a business plan and how to present it.

D. Profitability calculations (payback, pay-off, net present value, internal rate of return, calculations in nominal and real terms, and exercise and introduction of software tool).

E. Project information: how to describe your project in a business plan.

If a project is at a very early stage and it is not yet completely clear how the project is to be structured, it can be both slow and potentially error-prone to begin by developing a detailed plan for the project. Clarifying the overall strategy for the project before developing the detailed plan can be a very useful technique.

F. Economic, social and environmental benefits, including exercise and introduction of software tool.

The session provides a description of potential benefits from the proposed project to the local and national economy and to the environment. Some of the benefits that come from the project can be directly quantified in money terms, such as savings in raw materials, fuel savings, reduced labour, etc. and some may be only indirectly quantifiable, including improved product quality or marketability, and which might produce a benefit in terms of increased sales. There may also be other benefits which are not quantifiable in money terms, but may have a bearing on the project. These include aspects such as safety, improved working conditions and environmental benefits.

G. Measurements and verification: introduction of the International Performance Measurement and Verification Protocol (IPMVP, volume I for energy efficiency projects, volume III for renewable energy projects).

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\* Project sponsors mean project owners and/or project developers. Hereinafter, the terms will be used interchangeably.

The implementation of the IPMVP will help to increase energy savings, document financial transactions and enhance financing for energy efficiency projects. Using this protocol will increase the confidence level of investors and project sponsor knowing that project performance will be measured, monitored and verified according to an internationally recognized protocol.

- H. Financing plan, including exercise and introduction of software tools to calculate the disbursement and repayment plan.

The financing plan sets out how the transaction costs will be met. Normally, the bank will be only one of several sources of financing. In fact, the bank will require the project sponsor both to provide the equity for the project and to identify other potential sources of financing.

- I. Financial schemes and sources, including equity and mezzanine financing, third party financing and performance contracting, ESCOs, etc.

The major types of finance include:

- (a) Project owner's own resources: The bank will require cash of at least 5-20 per cent of the project costs. The valuation of the in-kind contributions should be the actual current market value (resale value) and not historical costs;
- (b) Supplier: the supplier may extend credit for the purchase of the necessary materials;
- (c) Local loans: for example, these loans may come from local banks or consumer credit institutions;
- (d) Foreign loans: these generally include loans from international financial institutions such as the World Bank and the European Bank for Reconstruction and Development as well as international commercial banks;
- (e) Foreign equity: cash from other investors;
- (f) Others: these may be grants, cash contributions or new financial instruments like mezzanine debt, performance contracting, third party finance, or a combination of debt and equity, such as convertible bonds.

- J. Criteria and requirements of financial institutions.

These include the basic requirements of the financial institutions for project documentation, technical, economic, financial and environmental viability of the project, its size, level of project sponsor support and enforceability of contracts.

- K. Homework introduction.

### Session 2

- A. Plenary presentation of homework.

- B. Market, how to describe in the business plan.

The purpose of this section is to describe the market in which the company operates, its general characteristics, customers, competitors and factors affecting the growth of the market and the position of the company on the market.

- C. Project and company cash flow, including exercise and introduction of software tool.
- D. Financial projections, including cash flow, sensitivity and financial analysis.  
The project sponsor's principal aim is to prove the financial viability of the project. The bank's major concern is for the cash flow from the project to be sufficient to cover the total debt service (all payments of interest and balance of the loan). The strength of the cash flow indicates the financial viability of the project.
- E. Risk assessment; evaluation of the main relevant risk elements for each project.  
In writing a business plan, the project sponsor must address the specific risks of the project with the aim of presenting a clear plan of how to overcome these risks, either by mitigation or by laying them off to other parties. Each project will have different kinds of risks and the magnitude of risks will differ from project to project. However, there are key areas of risk which every project sponsor should be aware of and should keep in mind when planning to write a business plan. These key areas of risks include: borrower/sponsor risk, pre-completion risk, completion risk, technology risk, input or supply risk, operating risk, approvals risk, regulatory and environmental risk, off-take and sales risk.
- F. Project implementation and management: how to organize project implementation and verification, roles and responsibilities, tendering procedures, time schedule.  
The bank will rely on the project sponsor to implement the project directly or to appoint contractors to implement the project in a timely manner and in a cost-effective way. In order for the bank to assess the risks related to implementation of the project, the sponsor will be required to describe the arrangements for implementation which include description of the major components of the project, the names of the contractor in charge of each component and the reasons for selecting a particular contractor and its relevant track record.
- G. Individual consultations on each project/business plan.
- H. Homework introduction.

### Session 3

- A. Plenary presentation of homework.
- B. Presentation techniques; how to present your project in a clear and understandable way to the financial institutions/investors.
- C. Financial schemes and sources tailored to meet the needs of the participants and the projects being developed.

D. Individual consultations on each project/business plan.

E. Homework introduction.

### VIII. ADDITIONAL SEMINAR FOR POLICYMAKERS

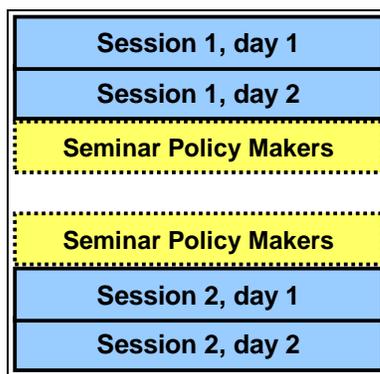
30. The Financing Energy Efficiency Investments for Climate Change Mitigation project will also provide assistance and support to national and regional authorities to introduce economic, institutional and regulatory reforms needed to support investments in energy efficiency and renewable energy projects in the participating countries.

31. To support the development of these reforms and improve the financial environment in selected countries it would be beneficial to increase the awareness and knowledge of the basic requirements for bankable projects among policymakers.

32. This additional seminar will aim at providing clear and concise information on what the general requirements of the international financial institutions are for an investment project and what are the main economic, institutional and regulatory barriers.

33. The seminar for policymakers could be arranged as an add-on to the session of the financial engineering/business planning programme. In some countries it might be useful to arrange a second (follow-up) session to organize discussions and consultations on how to overcome the main barriers in that specific country.

Table 4: Possible arrangements for the organization of financial engineering/  
business planning programme



34. The seminar may include short presentations on the following subjects:
- (a) Financial engineering and business planning – introduction
  - (b) Project information – how to describe your project in a business plan
  - (c) Financing plan
  - (d) Financial schemes and sources (including equity and mezzanine financing, third party financing and performance contracting, ESCOs, etc)
  - (e) Environmental benefits

- (f) Market, how to describe in the business plan
- (g) Financial projections (including cash flow, sensitivity and financial analysis)
- (h) Risk assessment
- (i) Project implementation and management
- (j) Measurements and verification
- (k) Criteria and requirements of financial institutions
- (l) Main economic, institutional and regulatory barriers for investments in energy efficiency and renewable energy projects

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