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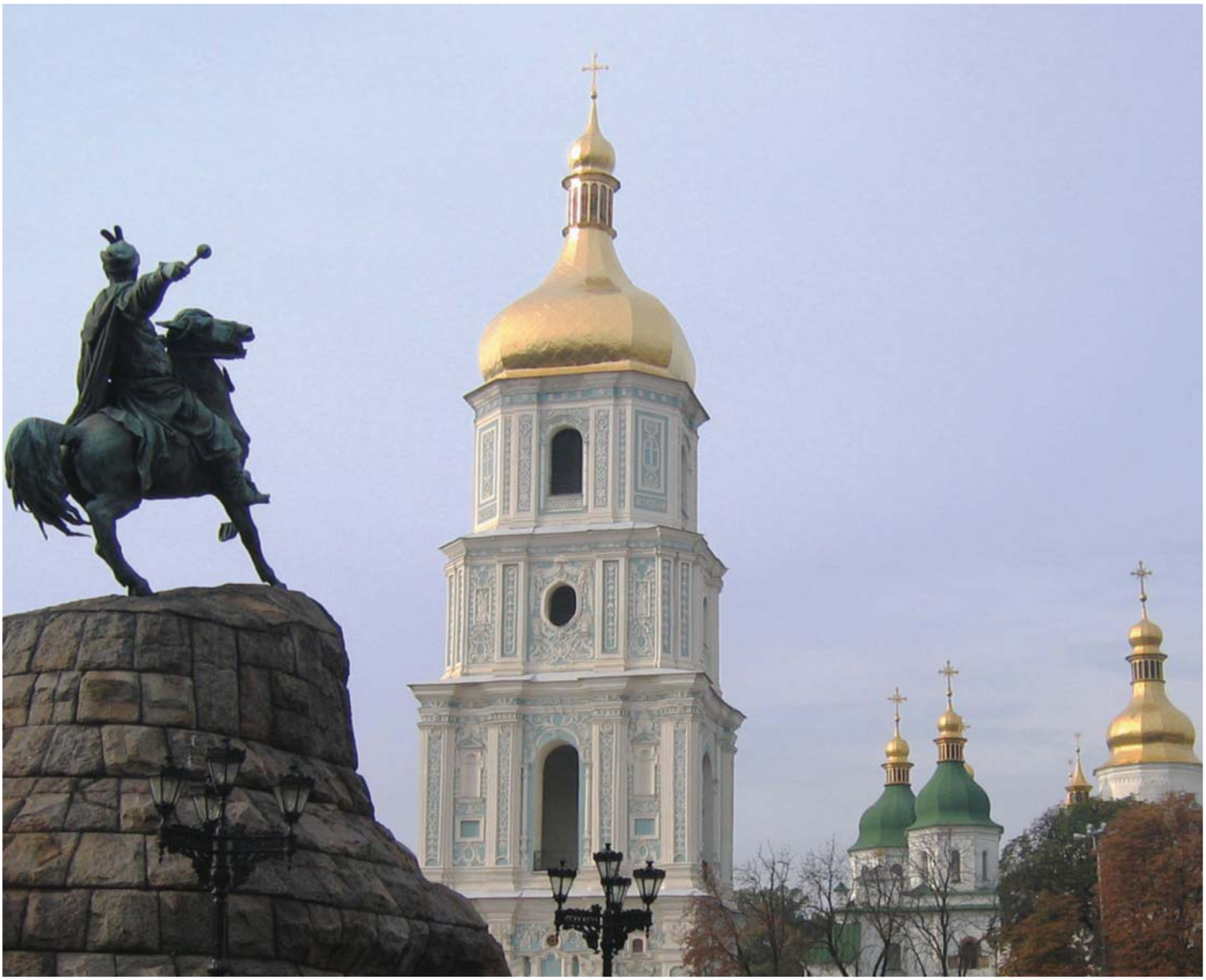

Handbook for the Development of JI Projects in Ukraine.

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CONTENT

1. INTRODUCTION

The use of the Joint Implementation Mechanism offers an interesting co-financing investment opportunity for the owners and developers of investment projects in the fields of energy efficiency, energy savings and renewable energies focusing on CO_2 emission reductions and the reduction of other greenhouse gases (GHG).

The Joint Implementation (JI) Mechanism is one of the agreed market-based mechanisms which can be used under Article 6 of the Kyoto Protocol to develop GHG emission reduction projects between industrialized countries (Annex 1 countries). The Kyoto Protocol, which was adopted at the third session of the Conference of the Parties (COP 3) in December 1997, became effective in February 2005. In the Protocol, industrialized (Annex B) countries agreed to take legally binding targets to reduce greenhouse gas emissions until 2012. The Protocol introduced three market-based mechanisms to achieve the agreed targets: Joint Implementation, the Clean Development Mechanism and Emissions Trading.

For projects in Ukraine the Joint Implementation mechanism can be applied. For this mechanism to be used and tradable certified Emission Reduction Units (ERUs) to be created out of a concrete investment project, a specifically defined JI procedure should be followed to demonstrate the additional effect of GHG emission reductions.

The purpose of this handbook is to transfer the relevant knowledge to potential Ukrainian project owners/developers and to strengthen their capabilities to use the JI mechanism efficiently for their investment strategies. The handbook will provide user-friendly and practice-oriented guidance through the validation procedure to be undertaken by Ukrainian companies as well as an-easy-to handle JI project pre-check, enabling potential project owners and project developers to check whether their planned investment projects would be eligible for the JI mechanism. The handbook especially aims to help Ukrainian companies to identify and support investment projects in the field of energy efficiency and energy savings as well as in the area of renewable energies. Its intention is to enhance German-Ukrainian technology cooperation and to increase opportunities for economic growth and the development of the relevant companies. The handbook ties up with the Regional Handbook on Procedures for Joint Implementation in the Baltic Sea Region which was elaborated and updated in 2005 within the framework of BASREC (Baltic Sea Region Energy Cooperation[1]), copies of which can be obtained from basrec.org.

This handbook supplements the BASREC JI Handbook, which explains the basic rules, terminology and procedures of the Joint Implementation Mechanism and gives a short overview of EU Emission Trading and CDM (Clean Development Mechanism, the second project-based flexible Kyoto mechanism used in developing countries), providing concrete guidance for the development of JI projects within the framework of the respective JI rules in Ukraine and existing Ukrainian legislation and an overview of the institutions and organizations relevant for development and implementation of JI projects in Ukraine.

[1] The members of BASREC are: Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia and Sweden.

2. BACKGROUND AND UTILIZATION OF THE KYOTO PROTOCOL FLEXIBLE MECHANISMS

Ukraine has a huge potential for reducing GHG, in particular by improving energy efficiency and utilizing renewable energies. Although participation in JI projects is voluntary for the countries and legal entities, the JI mechanism offers many Ukrainian companies an opportunity for acquiring foreign co-financing for investment into the development of their individual GHG emission reduction potential. It helps companies

- To overcome a potential lack of financing
- To make investment projects economically viable
- To introduce and develop highly sophisticated technologies

It would therefore not only have a substantial impact on accelerating modernization in the Ukrainian energy sector, industry and the communal sector but also help to save scarce and valuable energy resources. It would also create demand for energy efficient technologies and energy efficiency services and thus stimulate new business opportunities for Ukrainian companies. JI projects produce real GHG emission reductions and would therefore also help Ukraine meet its climate change mitigation obligations without any influence on the current surplus supply of Assigned Amount Units (AAUs).

The JI mechanism

The key idea of the JI mechanism is the implementation of a corresponding investment project in an Annex I country (host country) with the help of a foreign investor from another Annex I country. In exchange, the investor receives the certified emission reductions (ERUs) created by the project. The mechanism allows the transfer and acquisition of ERUs during the period 2008-2012. Early reductions might be sold as an equivalent amount of AAUs if the Annex 1 Parties participating in this JI project agree to sell and buy such early reductions.

In addition to conventional investment projects, JI projects must fulfil certain **additionality criteria** and require special approval. They should be **supplementary to domestic actions** in Annex 1 countries and should be **additional to any other emission reductions which would have occurred without the project.**

3. DEVELOPMENT FRAMEWORK FOR JOINT IMPLEMENTATION PROJECTS IN UKRAINE

3.1. Joint Implementation Two Track Approach

In order to participate in JI Projects, Annex 1 parties must meet the following criteria, known as the eligibility criteria:

- The participating party is a party to the Kyoto Protocol;
- The designated national focal point is in charge of approving JI projects
- An assigned amount (national quota) is established. For Ukraine: national annual emissions and sinks by gases and sources were calculated for 1990 and other years since 1990, submitted to the UNFCCC/Kyoto Protocol Secretariat in international format (Common Reporting Format), internationally reviewed and recognized according to Article 3 of the Kyoto Protocol;
- A national GHG accounting system is established for the estimation of GHG emissions and sinks;
- A national registry is established to account for the national assigned amount and to allow the transaction of units between Parties;
- Timely submission of annual GHG inventories to the UNFCCC.

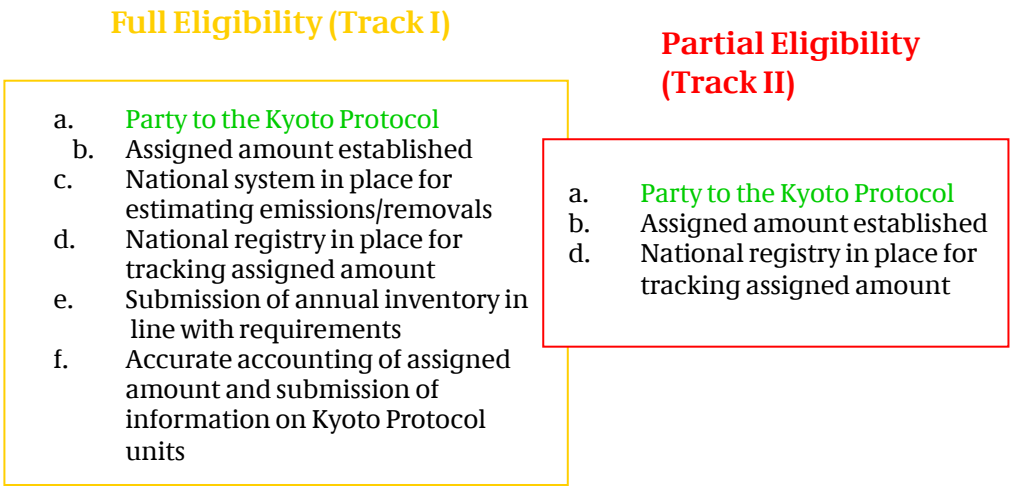

Figure 1 – Eligibility requirements

Depending on whether the involved Parties are in full or partial compliance with the outlined criteria (see figure 1), they have the option of implementing JI projects via two different tracks - **Track I or Track II**.

Track I allows for implementation of a Party's own national rules for selection of JI projects and estimation of emission reductions. It can be followed if the Party is in compliance with all the requirements for full eligibility.

Track II involves a specifically determined international procedure supervised by the JointImplementation Supervisory Committee (JISC). This track needs to be followed if the Party fulfils only a part of eligibility requirements at present (partial eligibility).

Common basic elements of the JI project cycle

Independent from the track used for project development and implementation there are some common basic elements of the JI project cycle which should be met. Thus, the JI project cycle contains steps and activities comparable to those undertaken in the development of any conventional investment project. The specific steps to be undertaken are described in more detail in the following chapters 1.1. and 3.3.

The project cycle can be divided into two main phases: the **development and the implementation phases.**

Once a project idea has been developed, the project should be assessed to determine whether it will produce a sufficient number of GHG emissions reductions to warrant further development. For assessment it is helpful to prepare the project idea and the concept of the project's development in a document summarizing the basic information - this is called the **Project Idea Note or Project Identification Note (PIN).** The PIN provides a short, general description of the project and its participants, applied technologies and preliminary estimations of expected emission reductions. Many potential buyers of ERUs have developed their own formats for PINs, which are all very similar, but do differ slightly from one another.

Annex 1 of this handbook provides a PIN form for a first project pre-check which may easily be transferred to most of the existing PIN forms.

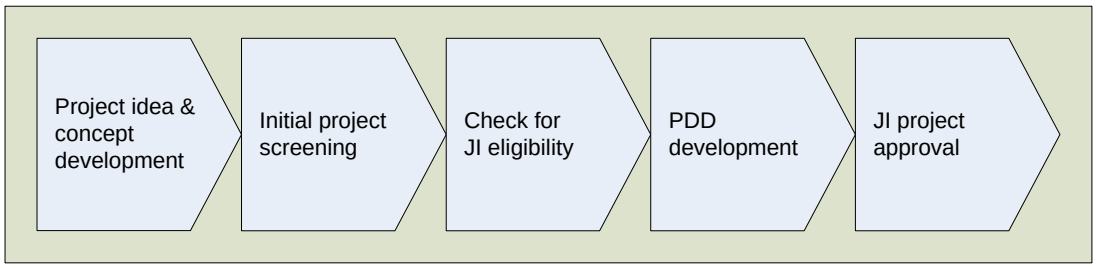

Figure 2 – The JI project development phase

It is recommended that PINs are submitted to potential investors and/or to potential buyers in order to enable them to make a first assessment of the project. This should include an assessment of the applicable and relevant international and national regulations and policies, as well as determine whether the national JI guidance and procedures for project approval have any bearing on development of the project under JI.

If the assessment is positive, the project participant should submit justification as to why the project should be approved to the national Designated Focal Point for JI mechanisms and discuss development of the proposed project as a JI project. The justification required for JI projects was established by Order No. 341 of the Ministry of Environmental Protection of Ukraine on 17 July 2006.

Most of the potential buyers require submission of the PIN together with a **Letter of Endorsement (LoE) or Letter of No Objection (LNO)** from the respective national authority or Designated Focal Point (DFP). The DFP in Ukraine is the Ministry of Environmental Protection of Ukraine. Such letters are required to ensure that the Government of the host country supports in principle implementation of such a project.

Many potential investors and buyers also require conclusion of a mutual **Letter of Interest or Letter of Intent (LoI)** or **Option Agreement** (agreeing the option to buy/sell exclusively the ERUs being created by the project to the investor/buyer) at a later stage with the project participants before implementing the JI project described in the submitted PIN. Such documents are usually required as a legal basis for financing of the next stage of JI project preparation: development of the relevant project documentation including a viable assessment of the emissions reductions to be achieved if the project were implemented. This documentation must follow the set format of a Project Design Document (PDD) where Track II is to be used and may have a different format if Track I is used.

The second phase is the **implementation phase,** which includes all monitoring, reporting and verification of emissions reduced or sequestered, and the transfer of ERUs.

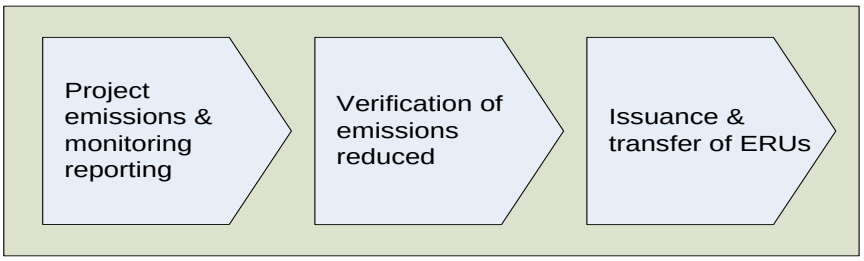

Figure 3 – The JI project implementation phase

Main differences between Track I and Track II procedures

Under **Track II** the project and the quantity of ERUs it will generate must be determined (checked and endorsed) by an independent accredited entity (determinator) under the rules and procedures provided by the JISC. These rules include an independent review of the GHG emissions baseline scenario, a monitoring plan and the independent verification of the monitored emission reductions before the ERUs can be issued and sold.

The key criterion for JI Track II projects is submission of the project documentation to JISC, established by the meeting of the first COP/MOP in Montreal in December 2005, for international consideration.

Under **Track I** the host county (Ukraine) is responsible for verification of the emissions reduced and determination of the additionality of those emissions, and must establish the relevant rules, which might be agreed with the investing party. In fact, verification procedures may vary by host country. However, project documentation must be developed for submission of the project to the host country's institution responsible for project approval. This documentation may differ in detail from the internationally determined Project Design Documentation (PDD) required under Track II, but the basic information required is similar. An assessment must therefore be made of whether the emissions reduced by the project are additional to what would have occurred otherwise, and stakeholder comments according to national guidelines for JI approval should be included. Finally, letters of approval should be obtained from the involved parties.

Most of the JI projects developed to date have followed Track II JI procedures.

3.2. Perspectives for Track 1 in Ukraine

According to Kyoto Protocol rules, Ukraine will be able to use Track I for approval of Joint Implementation projects if it is in full compliance with all eligibility requirements (see figure in the previous chapter). The eligibility requirements for Track I are identical to those set out in Article 17 of the Kyoto Protocol for International Emissions Trading mechanisms. If

the Ukrainian government is fully eligible, using Track I will require the establishment of rules and procedures for Track I to ensure that the emission reductions achieved are transparent and additional. It would then also be necessary to establish national rules for internal determination and verification of Track I JI projects.

The experts of the Ministry of Environmental Protection of Ukraine have expressed interest in switching to Track I by 2008. However, this will depend on how soon the national registry for the estimation of GHG emissions can be established.

Current status for obtaining full eligibility of Ukraine.

Eligibility Requirements	**Status**
a. Party to the Kyoto Protocol	(+) Ukraine ratified the Kyoto protocol in
b. Assigned amount established	(+/–) Assigned amount was calculated and submitted by Ukraine to UNFCCC. The UNFCCC delegates requested some clarifications and recalculations. Ukraine has already updated its calculation of AAUs.
c. National system in place for estimating emissions/removals	(+) Established.
d. National registry in place for tracking assigned amount	(–) Not established.
e. Submission of annual inventory in line with requirements	(+)
f. Accurate accounting of assigned amount and submission of information on Kyoto Protocol units	(+)

3.3. Step by Step Guide to the JI Second Track Project Cycle

Status of the options for utilization of JI Track II in Ukraine

The Marrakesh Accords defined 2000 as the starting point for JI projects. It is therefore impossible to receive ERUs for projects which were started before 2000. For those projects which started in 2000 or later, GHG emissions created in 2008-2012 may be transferred to buyers directly as ERUs.

If the Ukrainian authorities and national JI regulations allow the project participants to sell early GHG emission reductions for 2000-2007, these emission reduction units may be sold as equivalent amounts of Ukrainian AAUs from 2008 to 2012.

Where the transfer of AAUs is concerned, the Ukrainian government (as any other Annex I

country government) will be free to decide for what activities the AAU will be used, as long as the country is eligible and respects the specifications of the CPR (Commitment Period Reserve). However, the buyer's country should agree with this procedure.

The key issue for utilization of JI Track II in Ukraine is the approval by the Ukrainian Government of national procedures for the review and approval of JI projects and the nomination of a national authority authorized to carry out the national review and issue Letters of Approval (LoA) on behalf of Ukraine. Both of these conditions are in place.

JI Track Two Project Cycle

The JI project cycle can be divided into two main phases: the development and implementation phases.

JI Project Development Phase: initial steps and eligibility check

The initial steps are similar to the steps described in 1.1 which are common to both Track II and Track I.

If the first pre-assessment of the project in form of a PIN shows positive results, the next step of the project cycle would be the preparation of specific documentation: the Project Design Document (PDD).

JI Project Development Phase: development of PDD

The phase of PDD development includes the development of a full package of carbon documentation in both the English and Ukrainian languages. The full package of documents for governmental approval of the JI project includes:

- Calculation of the Emission Reduction Units or the Units of Absorption
- Monitoring plan for project implementation
- Environmental impact assessment
- Project financing plan

Project developers can find the required PDD form in Annex 2 to this Handbook.

Development of the PDD covers a **baseline study and monitoring plan** and will make it possible to determine whether the project:

- Has an appropriate baseline and monitoring plan
- Would result in additional reductions of GHG emissions
- Has been approved by the parties involved in the project

According to the Kyoto Protocol, GHG emission reductions generated by the JI project activities must be additional to those that would otherwise occur (**principle of additionality**). For this reason it is necessary to provide clear and convincing information as to what would happen on the project site without the project and what emission reductions will be achieved by the project.

The crucial criteria for additionality could be defined as follows:

1. Barriers in the implementation of the project that have an influence on emission reductions
2. Technical additionality: the use in the project of the most advanced technologies, being identical or superior in terms of their parameters to the best technologies used in the sector
3. Financial additionality: the additionality of the project will be recognized if the project is very risky and financial sustainability will

only be achieved from the revenues from carbon activities.

According to the *Guidance on criteria for baseline setting and monitoring* adopted at the fourth meeting of the JISC, additionality can be demonstrated by using one of the following approaches:

(a) If an approved clean development mechanism (CDM) baseline and monitoring methodology is used, all explanations, descriptions and analyses with regard to additionality shall be made in accordance with the selected methodology;

(b) In all other cases, one of the following options may be applied:

- Application of the most recent version of the "Tool for the demonstration and assessment of additionality" approved by the CDM Executive Board;
- Application of any other method for proving additionality approved by the CDM Executive Board;
- Provision of traceable and transparent information showing that the baseline was identified on the basis of conservative assumptions, that the project scenario is not part of the identified baseline scenario and that the project will lead to reductions of anthropogenic emissions by sources or enhancements of net anthropogenic removals by sinks of GHGs;
- Provision of traceable and transparent information that an accredited independent entity has already positively determined that a comparable project (to be) implemented under comparable circumstances (same GHG mitigation measure, same country, similar technology, similar scale) would result in a reduction of anthropogenic emissions by sources or an enhancement of net anthropogenic removals by sinks that is additional to any that would otherwise occur and a justification as to why this determination is relevant for the project at hand.

The most complicated issue is the development of a **baseline scenario** – a description of the GHG emissions which would occur without the project activity for the whole period of the expected project duration. The results of the baseline study should be used to estimate GHG emission reductions under the project for the duration of the project / crediting period.

New methodologies for baseline scenarios and project activity determination may be proposed, but the current practice is to use methodologies already approved by the CDM Executive Board for the various types of CDM project.

According to decision 10/CMP.1 "Implementation of Article 6 of the Kyoto Protocol" adopted at COP/MOP 1 in Montreal, methodologies for baseline and monitoring, including methodologies for small-scale projects approved by CDM EB, may be applied by project participants under JI as appropriate. All the CDM methodologies already approved by CDM EB and methodologies under review are available at the UNFCCC site http://cdm.unfccc.int/methodologies/. Annex 4 of the handbook provides a summary of approved baseline methodologies which may be relevant for JI projects in Ukraine.

But the use of the existing CDM methodologies is not mandatory and project participants may establish their own methodological approach to baseline and monitoring plan. If this option is chosen it is very important to follow and adhere to the *Guidance on criteria for baseline setting and*

monitoring adopted at the fourth meeting of the JISC.

The **Monitoring plan** establishes a set of requirements for monitoring and verification of GHG emission reductions archived by the project. Monitoring plans should explain by whom and how often emission reductions should be monitored, which instrumental measurements will be applied or how emission reductions will be calculated during the crediting period, and how results will be documented and verified. In principle, the monitoring plan may be revised, but only if it improves the accuracy or completeness of the information needed to measure and calculate the GHG emissions under the project. The project participant is responsible for monitoring project performance but is not necessary that he carry out the monitoring activity himself. He can delegate this to other parties.

The JI guidelines state that the project participants must submit an analysis of environmental impact. Ukrainian legislation requires that each technical project should contain an analysis of environmental impact. This chapter should be developed according to the requirements of the statutory document DBN A.2.2-1-2003 "Structure and content of materials required to assess environmental impact (EIA) when designing and building enterprises, buildings and facilities" (the full text is available in Russian at budinfo.com.ua/dbn/8.htm) and should include the following information:

- Reasons for carrying out the EIA
- Physiographic features of the region and site in which the property will be located
- General characteristics of the planned property
- Environmental impact analysis for the planned activities
- Social environmental impact analysis for the planned activities
- Anthropogenic environmental impact analysis for the planned activities
- Complex activities to ensure the normative state of the environment and its safety
- Environmental impact analysis at the construction stage
- Statement on the ecological effects of the activity

During PDD development, information on the proposed project should be made available to the local stakeholders for consideration and comments. The project participants should then provide in the relevant section of the PDD a list of stakeholders from whom comments on the project have been received, the nature of the comments, and whether and how the comments have been addressed.

JI Project Development Phase: PDD determination and JI project approval

Once the PDD has been completed it must be submitted for **determination** (independent review) to an Independent Entity (IE) accredited by the JISC. In 2006 the JI Supervisory Committee established its own Accreditation Panel which will accredit independent entities for determination of JI project PDDs. Until such validators are officially accredited for JI projects, IEs already accredited for CDM projects by the CDM Executive Board may be employed. An overview of IEs is given in

The IE will go through the documentation provided and check the validity of all references, assumptions and information. It is also possible

that the IE will undertake a field visit to assess whether the information provided and the assumptions made are valid.

The IE will make its determination report publicly available through the JI web site maintained by the UNFCCC Secretariat at http://ji.unfccc.int/.

JI Project Development Phase: Emission Reduction Purchase Agreement (ERPA)

The ERPA is an agreement between the project owner and the investor/buyer of the ERUs governing the purchase and sale of GHG emission reduction under the project. Upon conclusion of the ERPA the project goes into the implementation phase. For this Emission Reduction Purchase Agreement a **Letter of Approval (LoA)** is required from the host country which formally approves the project for the purposes of Article 6 of the Kyoto Protocol and confirms that the emission reductions achieved by the project will be transferred to the buyer.

A project owner wishing to obtain a Letter of Approval from the Ukrainian government should proceed as follows:

1. After obtaining a Letter of Endorsement the object owner should develop the project according to the specific requirements established by the Ministry of Environment and include the full package of documents including PDD.
2. The object owner should submit to the Ministry of Environmental Protection the developed project with the Determination Report of the independent expert organization eligible to validate projects aimed at reducing or increasing absorption of anthropogenic GHG emissions, and perform an assessment of results. The Determination Report should be issued within a term specified in the agreement concluded between the project owner and the independent expert organization.
3. If necessary, the Ministry of Environmental Protection will arrange an expert evaluation of the project in order to assess conformity of the project with the requirements established by the Ministry of Environmental Protection.
4. The Ministry of Environmental Protection will evaluate the project and the accompanying documents submitted by the project owner within one month and in case of positive determination issue a Letter of Approval (LoA).
5. If the Ministry of Environmental Protection refuses to issue an LoA, it will inform the project owner within one month in writing, specifying the reason.
6. The approved project will be registered by the Ministry of Environmental Protection for accounting of the reduction or increase of absorption of anthropogenic GHG emissions.

A more detailed description of the JI Track Two project cycle, guidelines and recommendations for PDD development, examples of methodologies for calculations, references etc. is given in the BASREC Regional Handbook on Procedures for Joint Implementation in the Baltic Sea Region (2006) of the **BASREC JI HANDBOOK**, which is published in English and Russian (www.basrec.org).

JI Project implementation phase

Under implementation of a JI project, the emission reduction units may be transferred through national registries only after they have been properly monitored according to the monitoring plan and confirmed under an independent verification procedure. The monitoring plan and its validation by an

Independent Entity is a mandatory part of the PDD form approved by the JISC (see Annex 2).

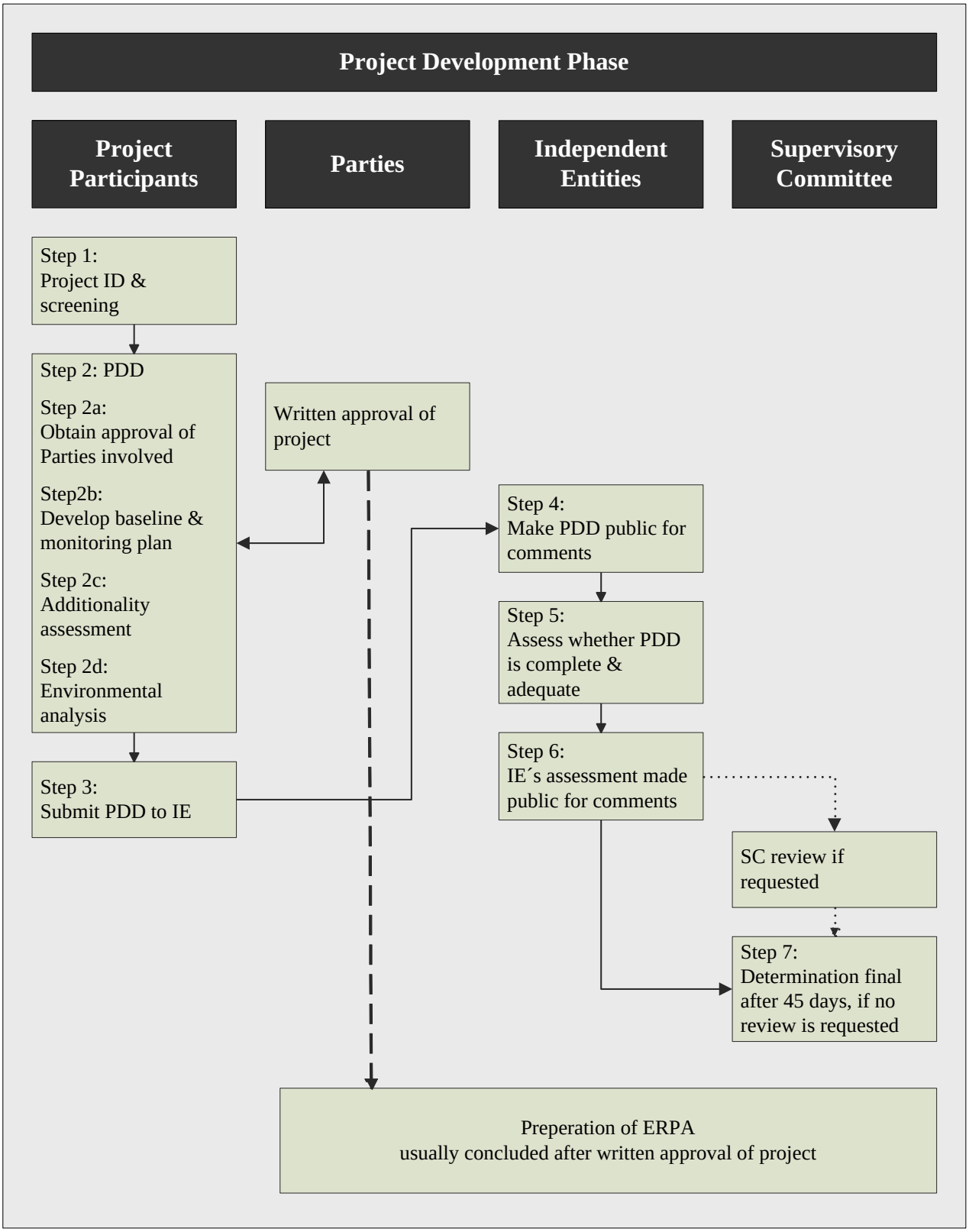

Figure 4 – Summary of the JI project development phase

4. INTERNATIONAL TYPES OF COOPERATION

International experience has shown that in principle two different types of JI projects are possible, depending on the type and depth of the involvement of the foreign investor.

4.1. Joint Implementation Project Option: Selling of Emission Reduction Units

In this case the project can be fully developed and implemented by the Ukrainian project owner himself. No intangible knowledge is needed. The expertise and equipment required to implement the project can be purchased on the market. To complete the financing scheme for the project, the anticipated income from the sale of project ERUs is needed. This type of project assumes that the project owner develops his business and financing plan on his own.

Advantages: As no specific knowledge transfer is needed for technical project implementation and no additional financing except for income from ERUs is required, the ERUs can be offered to a wide range of "carbon" investors, including international carbon funds, brokers and foreign companies active in any sector and interested in buying ERUs as a tradable commodity. In demand-driven markets the best offer can be selected.

Disadvantages: At an international level, the number of proposed projects eligible for CDM or JI is constantly increasing. As theses types of JI projects sell ERUs as a commodity, they are facing increasing competition. Minimum amounts of ERUs delivered by a project and the reliability of the delivery of ERUs are therefore becoming increasingly important selection criteria for potential carbon investors (buyers of ERUs). High standards regarding the guarantees required from the project owner are set to ensure complete delivery of the expected and agreed number of ERUs. No support for the technical implementation of the project is provided. If new and highly innovative technologies are to be implemented in a project, some obstacles may occur because the technical expertise required to prove and approve an innovative or technically complex project might not be available.

Requirements made by potential investors (buyers of ERUs):

Carbon funds are the most common customers for this type of project. They have elaborated standardized project assessment tools and standardized draft Emission Reduction Purchase Agreements (ERPAs) which enable them to implement project assessment and ERU acquisition efficiently. Price offers are usually publicly announced and transparent. Funds generally offer some financial support for development of the PDD and project implementation. Certain carbon funds have set priorities concerning project activities and host countries, but the requirements are usually publicly available. There is strong interest in creating portfolios of different types of projects so as to spread risks.

An overview of the relevant carbon funds operating internationally is given in Annex 3.

Commercial banks also purchase ERUs. Many of them do this business for clients obliged to reduce GHG emissions under their national laws, but also for commercial purposes. Some of the banks have set up subsidiaries which also offer preparation of

the project documentation, but they also purchase projects which have already received international (Track II) or national (Track I) approval.

Brokers offer services to companies that are prepared to sell or buy ERUs as commodities. These services include the elaboration of the respective documentation (PIN, PDD etc). They help clients to identify potential buyers of ERUs and support the sale of the ERUs. They do not usually buy ERUs themselves. Some brokers are related to banks which buy ERUs and are also prepared to provide additional investment financing if necessary.

Foreign companies, especially those obliged to reduce emissions, tend to buy certificates from projects close to their core businesses in order to lower the risk of project failure. The purchase of certificates from projects unrelated to their own business is usually managed through trusted intermediaries. As standardized ERPAs are generally not available, the negotiation of agreements might be more time-consuming. This may change in future once big companies have gained experience in ERU purchasing.

Equipment suppliers provide carbon financing (purchase of ERUs) by selling contracts to the aforementioned institutions, as they are not usually the final buyers of ERUs.

In most cases, advanced payment from the purchased ERUs might be offered by the investors on the condition that financial guarantees are provided by the project owner.

Many of the investors discussed above offer part of the ERU purchase price as advanced payment and financial support for preparation of PDDs and determination. This will, of course, discount the price of the ERUs. The more the project owner has done at his own expense (existence of PDD, LoA etc.), the higher the price that may be achieved per ERU.

4.2. Joint Implementation Project Option: Foreign Direct Investment

This option will be chosen if the project needs a foreign investor for development and implementation. The foreign investor acts as partner of the project owner in some or all of the following project phases: project development, financing, project implementation and operation. This type of project requires closer cooperation with the investor.

Advantages: This type of project provides access to intangible knowledge and might have a positive impact on process management and process innovation. Sharing ERUs might be negotiated where closer institutional cooperation is established (for example creation of a Joint Venture). Access to additional financing might be facilitated because of the investor's access to international financing, and the credit rating could be improved. Carbon financing is part of the general financing scheme. In addition, advanced payment might be possible without a financial guarantee if the investor himself is able to provide the respective guarantee.

Disadvantages: Decision making needs to be coordinated and agreed between partners.

Requirements made by potential investors:

Potential direct investors might be **equipment suppliers** willing to participate as investors, **financial investors** and **partners in a joint ´venture or other form of cooperation.** They provide carbon financing (purchase of ERUs) and access to additional financing if necessary. Usually

the partner or the equipment supplier also provides his own engineering services. Agreements for the purchase of ERUs might take a variety of forms.

Some of the existing carbon funds are related to **banks**, which enables them also to provide investment financing and export financing for the equipment suppliers involved. This is the case with the KfW Carbon Fund, which is related to the KfW Banking Group, and with the TGF, which is managed by NEFCO.

5. GERMAN LEGISLATION AND GENERAL FRAMEWORK

German legislation

On 30 September 2005 Germany brought the law on project-related mechanisms into force to translate into national law EU Directive 2004/101/EC amending the Directive establishing a scheme for greenhouse gas emission allowance trading within the Community in respect of the Kyoto Protocol's project mechanisms, which is binding for all EU Member States. The law states that project approval must be given by the responsible German institution if the validation report for a project shows the additionality of emission reductions produced by the project, but severe negative environmental impact will be created by that project.

The German institution responsible for project approval is the German Emissions Trading Authority (Deutsche Emissionshandelsstelle – DEHST) in Berlin.

Applications for JI project approval should include:

- PDD
- Validation Report
- Letter of Approval of the Host country

The application should be directed to the following address:

Umweltbundesamt
Deutsche Emissionshandelsstelle
Bismarckplatz 1
14193 Berlin
Phone: +49 (0) 30 8903 50 50
www.dehst.de

The DEHST is obliged to communicate its decision on project approval within two months after receipt of the application documents. After approval the DEHST includes the project in the German register of project activities. DEHST requires payment of a fee for submission of a Letter of Approval.

EU Directive 2004/101/EC forms the basis for the criteria required for the different types of JI projects. ERUs generated from nuclear facilities and credits that may be generated through land use, land use change and forestry (LULUCF) are therefore **excluded from approval in Germany**. For potential ERUs generated from hydro power stations above 20 MW it must be shown that the project is in compliance with the criteria and guidelines of the World Commission on Dams. In addition, ERUs generated on sites listed in the National Allocation Plans (NAP) of the EU Member States are also excluded from approval.

The law on project-related mechanisms focuses on Track I procedures, expecting that Germany will be able to fulfil the eligibility criteria in time. But the procedures established are very similar to JI Track II requirements. The law will be amended to include Track II in the near future.

The National Allocation Plan II (NAP II), which allocates emission allowances to German GHG emitting companies with capacities above 20 MW for the second commitment period (2008-2012), allows German companies to use the project mechanisms (JI and CDM) to fulfil 22% of their overall GHG obligations. In fact, the demand from German companies for GHG emissions through JI or CDM projects could be as much as 90 millions tonnes each year. The German Federal Ministry of Environment, Nature Conservation and Nuclear Safety negotiates MoUs with potential Host Countries in order to facilitate the transfer of ERUs.

Function and requirements of the German KfW Carbon Fund

In Germany the **KfW Carbon Fund** purchases ERUs and CERs. German and European companies expecting reduction obligations and wishing to use the project-based Kyoto mechanisms as a compliance tool in the ETS will mainly be considered as recipients of these emission credits. The KfW Carbon Fund is a buyers' pool of participating German and European companies with KfW acting as their trustee.

KfW (KfW Bankengruppe) is the promotional bank of the Federal Republic of Germany. 80% of the bank is owned by the Federal Government, and a 20% share is held by the German Länder, resulting in a triple A rating. The bank is domiciled in Frankfurt am Main.

KfW intends to acquire a balanced portfolio of Emission Reduction Purchase Agreements by sector, technology, host countries and counterparties. In this context Ukraine plays a major role as a host country with vast potential for Joint Implementation projects and excellent opportunities for investors. In general, such JI projects should be able to deliver a minimum of 50,000t CO_2e a year, ideally from 2008 onwards. The creditworthiness of project proponents should be proven.

For KfW due diligence, the documents required from project proponents include PIN or PDD, host country Letter of Endorsement or Letter of Approval, validation report, business plan and an environmental impact assessment report or similar. The fund may provide some financial support for preparation of the documents if required.

Please see Annex 3 for who to contact.

Aims and requirements of German companies as potential investors

In principle, all companies whose sites are subject to caps on CO_2 emissions imposed by Germany's National Allocation Plan (NAP) for the period of 2008-2012 are interested in using the project based Kyoto Mechanisms (JI and CDM) for compliance. These companies belong to the energy sector (energy generators, refineries) and to energy intensive sectors such as the chemicals industry, pulp and paper manufacturing, manufacturers of building materials and the metallurgical industry. Some of the companies already have experience with CDM projects, the certificates for which (CERs) can be used in the European Emission Trading System since 2005, and are involved in the preparation of JI projects. However, the bulk of the companies has not yet had much experience with JI. Experience shows that they are looking for project activities linked with their core businesses in order to facilitate risk management. In addition, they are interested in special types of project such as the use of mine methane for energy where standardized approaches approved under CDM methodology are available. Companies from the energy sector are also interested in becoming real investors where the project activity is in the energy sector.

6. UKRAINIAN LEGISLATION AND GENERAL FRAMEWORK

6.1. General Background

Since 2002, Ukraine has adopted new legislation, regulations and procedures aimed at improving the investment climate in its economy in general and the energy sector in particular. Accession to the WTO and the European integration process are among the top priorities of Ukraine's foreign economic policy. These are considered systemic factors of national economic development, foreign trade liberalization and a transparent environment for foreign investment.

The efforts of the government regarding improvement of the business environment and the investment climate in the country are beginning to bear fruit. Despite the political risks, investment grew in the first quarter of 2006 by almost 16%, 4.5 times more than during the corresponding period of 2005, and foreign direct investment was at its highest level since 1991.

JI projects are in fact special investment projects with participation of foreign investors (buyers of ERUs and sometimes additional direct investors). They therefore need to be in line with the respective regulations in Ukraine. General investment activities are regulated by the Law of Ukraine on procedure for foreign investments No. 93/96-BP of 19 March 1996 (the last amendments to this Law were adopted on 11 June 2003) and by the Law of Ukraine on protection of foreign investments. These laws establish rules for foreign investors in Ukraine and protect such investors. The general requirements for foreign investments are the same as for local investment. Most Ukrainian JI projects also need foreign investment for implementation in addition to income from ERUs.

Business environment

Investor considerations

- Ukraine remains a challenging place to do business
- Many investment opportunities exist, but Ukraine is still developing the legal and institutional frameworks required to support international business fully

General business climate

Since becoming independent in 1991, Ukraine has struggled to shift from a centrally planned economy to a market environment. Since 2000, Ukraine has implemented significant positive economic and legal reforms. The economy grew at an annual rate exceeding 7% over the period to 2006, including 12% growth in 2004. The growth was fuelled by strong domestic demand, low inflation, and solid consumer and investor confidence. Ukraine generally encourages foreign trade and investment, and laws allow foreigners to purchase businesses and property (but not agricultural land), repatriate revenue and profits, and receive compensation if property is nationalized. Much reform is still needed, as complex laws and regulations and weak enforcement of contracts by the courts still hinder foreign direct investment.

There has been a lot of interest recently in Mergers & Acquisitions (M&A). The 2006 PwC M&A Survey noted that the M&A market increased in size from USD 2.3 billion in 2005 to USD 3.4 billion in 2006, with an average deal value of USD 45 million. The deal volume rocketed from 85 in 2005 to 171 in 2006 - up 101%, making Ukraine the fastest growing M&A market in Central and Eastern Europe (CEE). The hot industries are manufacturing, financial services and food &

beverages. The average deal size in 2005-06 was USD 114 million in financial services, USD 14 million in manufacturing, and USD 11 million in retail & wholesale.

Superficially, taxes appear quite low - 25% for companies, 15% for individuals while value-added tax (VAT) is 20%. There are many underlying issues, however:

- Restrictions on deductions mean the effective corporate tax rate is close to 30%;
- Social security contributions can be significant. For 2007, employer contributions to various funds will exceed 36% for employees earning less than USD 1,560 per month;
- VAT refund constraints, as well as restricted rules for zero-rating sales of services to non-residents, mean that VAT can become a significant cost to business.

Although Ukraine has extensive human capital, natural resources, and industrial potential, it is clear that the country still faces significant challenges. The 2006 World Bank Doing Business study ranked Ukraine as the second most difficult country in which to pay taxes out of 185 countries surveyed. This has more to do with the level of tax accounting required than intrinsic difficulties in following legislation. Nonetheless, there is clear room for improvement.

Legal environment

The Ukrainian judicial system underwent significant reforms in 2002. Senior judges are now nominated by Parliament and appointed by presidential decree for five years, after which Ukraine's Supreme Council confirms them for life. Although the system has improved significantly, there are still many problems. The Supreme Court is regarded as being an independent and impartial body, but the same cannot yet be said for the lower courts. Courts also remain under-funded, meaning they are often understaffed while judges may not have sufficient background to resolve adequately some modern issues in corporate law, taxation, bankruptcy, and intellectual property. Poor enforcement of court decisions is also a significant problem.
A legal framework exists and courts are always there as an option for resolving disputes, but issues may best be resolved outside of the judicial system. It is worth considering arbitration as an alternative dispute resolution mechanism when drafting contracts, although it needs to be recognized that the Ukrainian alternative disputes resolution mechanism is still developing and there is still a shortage of skilled arbiters in the country.

Regulatory legislation

Ukraine is still struggling to build a legal system that facilitates easy interaction with the international community. Many issues are not dealt with by a single law, so it may be necessary to piece several laws together to develop understanding of an issue. The various laws may also be ambiguous or contradictory, which complicates the issue further. There is no consolidated tax code, although there are plans to introduce one by 1 January 2008.

The following major pieces of legislation (in addition to taxation law) affect foreign investment into Ukraine:

- *On Procedure for Foreign Investments* sets out in broad terms Ukraine's policy on inward investment and the rights and obligations of foreign investors.
- The *Civil Code* regulates civil relationships, the establishment of legal entities and personal property rights.
- The *Commercial Code* was enacted on the same day as the Civil Code, and governs

business relationships. The Commercial Code is intended to regulate issues that are not dealt with in the Civil Code, although in practice there is some overlap.

- *On Securities and Stock Market* governs the public issuance and trading of securities.
- *On Protection of Economic Competition* restricts business monopolies, and aims to ensure an efficient operation of the Ukraine economy through the development of competition. The majority of mergers and acquisitions in Ukraine are likely to require pre-approval from the Anti-monopoly Commission.
- *On Protection from Unfair Competition* aims to protect business entities and consumers against unfair competition.
- *On Environmental Protection* establishes a framework for pollution charges to be imposed on any legal entity that discharges contaminants into the environment.
- Intellectual property rights are governed by various laws, including *On Protection of Rights to Inventions and Useful Models*, *On Protection of Rights on Industrial Design*, *On Protection of Rights for Trademarks for Goods and Services*, and *On Copyright and Related Rights*.

Foreign investor associations

There are a number of foreign business chambers in Ukraine, including the American Chamber (www.amcham.kiev.ua) and the European Business Association (www.eba.com.ua). These chambers consolidate the efforts of foreign investors in Ukraine. They both have active committees on various issues affecting business and investors in Ukraine. As part of its ongoing efforts to present suggestions to the Ukrainian authorities for improving the investment climate, the European Business Association publishes a report entitled *Barriers to Investment in Ukraine*. The latest publication (2006) can be downloaded from their website. The main impact of the associations on the JI process is in the opportunities to cooperate with foreign investors. Such chambers have a wide database on investment companies willing to work in Ukraine, and anyone can request detailed information on the foreign investment process in Ukraine.

Investor considerations

- There are very few restrictions on foreign investment
- The Ukrainian legal system is still evolving
- Ukraine has limited foreign exchange restrictions, but these should not create unmanageable problems

Climate for foreign investment

Ukrainian authorities regularly declare a keenness to encourage foreign investment and the broader public is well disposed to foreign investment. There are few restrictions on foreign ownership. The major exceptions are publishing and broadcasting, and the manufacture of weapons. Otherwise, the regulatory framework for the establishment and operation of businesses in Ukraine by foreign investors is similar to that for domestic investors. As a general rule, investment permits are not required, but all enterprises must be established according to the form and procedure prescribed by law and registered with the appropriate government agencies. Foreign investors are generally not required to seek special approval from authorities for foreign direct investments. However, both domestic and foreign investors still encounter difficulties at a practical level. These do not relate specifically to the issue of foreign ownership or investment, but rather to administrative hurdles that are arbitrarily enforced, or to random delays.

6.2. The Energy Strategy of Ukraine until 2030 and its Impact on the Implementation of JI Projects in Ukraine

Ukraine's key energy policy tasks and priorities are defined in the *Energy Strategy for the Period until 2030* as adopted by the Cabinet of Ministers in March 2006. The Strategy proceeds from the understanding that Ukraine has limited conventional energy resources and thus has to rely on imports, and that it also suffers from a lack of diversification of energy imports. For these reasons, the Strategy highlights the importance of the rational use of energy, the promotion of domestic energy production, and switching to alternative energy sources. In general, the development of JI projects to develop this potential is therefore greatly welcomed by the Ukrainian government.

On 13 March 2006, the Fuel & Energy Ministry published its draft *Energy Strategy for the Period through 2030*. This was developed by the National Science Academy's Power Industry Institute on the basis of Presidential Decree № 1863/2005 of 27 December 2005, presidential edicts, relevant resolutions of the Cabinet, parliamentary hearings, public discussions and proposals made by people's deputies and energy companies.

The Energy Strategy's rationale stems from the incumbent authority's desire to make Ukraine an active and influential player on the international energy market and a participant in transnational energy projects. To achieve this objective, the government must attempt to boost Ukraine's capacity to export and import fuels. As the document notes, Ukraine belongs to that category of nations which can only partly meet their demand for traditional energy resources and so have to import fuels.

According to the Energy Strategy, Ukraine's GDP is expected to grow almost threefold by 2030, with consumption of primary energy resources increasing by only 47.5 percent (from 205.2m tons in 2005 to 302.7m tons in 2030). Consumption of electric power will increase 2.2fold to reach 395.1bn kWh, and Ukraine will export up to 25 bn kWh. Consumption of coal will increase almost twofold to 130.3m tons from 65.9m tons in 2005. Consumption of natural gas will fall by almost 36 percent from 76.4bn cu. m in 2005 to 49.5bn cu. m in 2030. Also, Ukraine will boost re-exports of gas from 5bn cu. m in 2005 to 23bn cu. m in 2030. Consumption of petroleum will increase by a third to 23.89m tons. The Energy Strategy also envisages energy-saving measures, boosting fuel extraction and the generation of electric power, particularly by nuclear power plants (NPPs), and lessening Ukraine's dependence on imports of fuels.

The Energy strategy of Ukraine foresees the mass construction of NPPs, which in turn are not eligible for joint implementation. Very little attention is paid to alternative and renewable energy sources and biomass projects in the Strategy. Mass reconstruction of outdated thermal power plants and combined heat and power plants is also considered by the programme. However, the Strategy does not foresee any financing or approval of programmes for specific projects. It can thus be concluded that the Energy Strategy is of an ambitious nature which will not limit the opportunities to realize JI projects in Ukraine.

Other programmes and laws have been adopted for several potential types of JI project, and these could influence the additionality issue in JI projects. In practice, the programmes have not yet provided financing for concrete projects, as will be explained below.

Waste

In 1998, the National Law on Waste was adopted. To ensure implementation of this law, a number

of governmental and ministerial regulations were established during the years that followed, including the national industrial and municipal waste programme. The principle is to close old, small and poorly engineered landfill sites and improve larger, more viable sites.
These programmes require the development of regional and local plans by the end of 2005. In Ukraine there are clearly severe environmental problems related to landfill waste, as landfill gas is now being emitted uncontrolled from many landfills, resulting in odour problems and contributing to global warming. In reality, therefore, the law and programmes discussed above had not effect, and there are no actual barriers to JI projects in this sector.

Renewable energy projects
There is only one programme in this sector, which covers the development of the wind energy in Ukraine. The realization of JI projects in this sector would therefore not be affected.

Coal mine methane
A national programme has been established in Ukraine which allows for the granting of budget funds for development and improvement of coal mine degassing systems. Unfortunately, no positive decisions and actions have been taken to implement this programme.

In summary, conditions for JI projects in Ukraine are favourable, and unlikely to be affected much by current legislation.

6.3 Legislation and Regulations Concerning Utilization of the JI Mechanism

A whole series of laws and decrees have been prepared for the consideration and approval of JI projects in Ukraine. The Ministry of Environmental Protection of Ukraine is responsible for approval of JI projects at a national level and should be contacted for issuance of LoEs and LoAs.

The following laws on Kyoto mechanisms and joint implementation are currently in force in Ukraine:

1. Law of Ukraine "On the Ratification of the United Nations Framework Convention on Climate Change"
2. Law of Ukraine "On the Ratification of the Kyoto Protocol to the United Nations Framework Convention on Climate Change"
3. Decree of the President of Ukraine "On the coordination of activities concerning implementation of Ukraine's commitments under the UN Framework Convention on Climate Change and Kyoto Protocol to the United Nations Framework Convention on Climate Change"
4. Decree of the Cabinet of Ministers of Ukraine of 18 August 2005 No. 346-p "On confirming the National action plan for implementation of the provisions of the Kyoto Protocol to the United Nations Framework Convention on Climate Change"
5. Decree of the Cabinet of Ministers of Ukraine of 14 April 1999 No. 583 "On Inter-agency commission on ensuring implementation of the United Nations Framework Convention on Climate Change"
6. Decree of the Cabinet of Ministers of Ukraine of 22 February 2006 No. 206 "On

confirming the rules for review, approval and implementation of the projects aimed at reducing the amount of anthropogenic emissions or increasing removals of greenhouse gases in accordance with the Kyoto Protocol to the United Nations Framework Convention on Climate Change"

7. Decree of the Cabinet of Ministers of Ukraine of 10 April 2006 No. 248 "On the Rules for coordination of activities concerning implementation of Ukraine's commitments under the United Nations Framework Convention on Climate and Kyoto Protocol to the United Nations Framework Convention on Climate Change"
8. Decree of the Cabinet of Ministers of Ukraine of 21 April 2006 No. 554 "On confirming the order of operation of the system for the estimation of anthropogenic emissions and removals of greenhouse gases not controlled by the Montreal Protocol"
9. Decree of the Ministry of Environmental Protection of Ukraine of 1 June 2006 No. 273 "On confirming the methodological guidelines concerning preparation and submission of Joint Implementation projects by legal entities"
10. Decree of the Ministry of Environmental Protection of Ukraine of 17 July 2006 No. 341 "On confirming the requirements to the documents substantiating the amounts of anthropogenic emissions and removals of greenhouse gases necessary for obtaining a Letter of Endorsement by the owner of an emissions source where a Joint Implementation project is planned to be implemented"
11. Decree of the Ministry of Environmental Protection of Ukraine of 17 July 2006 No. 342 "On confirming the requirements to preparation of Joint Implementation projects"

The most important decrees related to the realization of JI projects in Ukraine are described in more detail below.

Decree of the Cabinet of Ministers of Ukraine of 22 February 2006 No. 206 "On confirming the rules for review, approval and implementation of the projects aimed at reducing anthropogenic emissions or increasing removals of greenhouse gases in accordance with the Kyoto protocol to the United Nations Framework Convention on Climate Change"

This decree approves the procedures for implementation of JI projects in Ukraine. Since the procedure is fairly straightforward, it is duplicated in its entirety below (for the full official version in Russian, please go to zakon1.rada.gov.ua/cgi-bin/laws/main.cgi?nreg=206-2006-%EF).

PROCEDURE
for Consideration, Approval and Implementation of Projects
Aimed at Anthropogenic Emissions Reduction
or Greenhouse Gas Absorption Increase
Pursuant to Kyoto Protocol to the United Nation Framework Convention
on Climate Change

1. This Procedure shall establish the procedure for consideration, approval and implementation of projects aimed at anthropogenic emissions reduction or greenhouse gas absorption increase pursuant to Article 6 of Kyoto Protocol to the United Nation Framework Convention on Climate Change (995_801) and Decisions of the Eleventh Conference of the Parties to the United Nation Framework Convention on Climate Change (995_044).

2. For consideration of proposals on reduction of volumes of anthropogenic emissions or increase of greenhouse gas absorption, a manager of an enterprise, on whose territory a workshop, unit, a mounting or any other object or a detached unit thereof is located, operation of which causes greenhouse gas, its precursor or aerosol intake into the free air, or any object absorbing greenhouse gas, its precursor or aerosol (hereinafter referred to as "the owner of the object"), shall submit a written and electronic application (petition) with documents supporting such volumes to the Ministry of Environmental Protection of Ukraine.

A sample application (petition) and the list of documents to be attached thereto shall be approved by the Ministry of Environmental Protection of Ukraine.

3. The Ministry of Environmental Protection of Ukraine shall, within a one-month period, consider an application (petition) and supporting documents submitted by the owner of the object and, in case of a positive decision, issue a letter of support.

In case of refusal to issue the abovementioned letter, the owner of the object shall be notified thereof within one month in writing with indication of reasons.

4. After the receipt of a letter of support, the owner of the object shall, pursuant to the requirements established by the Ministry of Environmental Protection of Ukraine, develop a project that must contain the following sections:

the most probable forecast for the dynamics of anthropogenic emissions from sources or greenhouse gas absorption by absorbers without the project implementation (basis research);

calculation of emission reduction (absorption) units;

schedule of project implementation monitoring;

environmental impact assessment;

schedule of project financing.

5. The owner of the object shall submit the developed project supported by the conclusion of an independent expert organization entitled to examine projects aimed at the reduction of volumes of anthropogenic emissions or increase of greenhouse gas absorption and assess the obtained results, to the Ministry of Environmental Protection of Ukraine. The conclusion shall be provided within the term established by the agreement entered into by the owner of the object and an independent expert organization.

6. Aiming at assessment of the project for compliance with the established requirements, the Ministry of Environmental Protection of Ukraine shall, in case of need, arrange for the expert assessment of the project.

7. The Ministry of Environmental Protection of Ukraine shall consider the project and the supporting documents submitted by the owner of the object within one month, and in case of a positive conclusion shall issue a letter of approval regarding thereof.

In case of refusal to issue the abovementioned letter, the owner of the object shall be notified thereof within one month in writing with indication of reasons.

8. For the purposes of maintaining records of anthropogenic emissions volumes reduction or greenhouse gas absorption increase, the approved project shall be registered in the Ministry of Environmental Protection of Ukraine.

9. Monitoring of volumes of anthropogenic emissions or greenhouse gas absorption pursuant to the project shall be performed by an independent expert organization.

10. A report on the results of examination and monitoring of volumes of anthropogenic emissions or greenhouse gas absorption shall be submitted by the owner of the object to the Ministry of Environmental Protection of Ukraine for registration.

Transfer of anthropogenic emission reduction (absorption) units from the National Register of Emissions and Greenhouse Gas Absorption to the register of the respective partner-country shall be done after the abovementioned report, as well as reduction (absorption) volumes of greenhouse gas emissions reached as the result of the project implementation, have been registered in the Ministry of Environmental Protection of Ukraine.

11. Data on projects implementations shall be published in the mass media.

Decree of the Ministry of Environmental Protection of Ukraine of 1 June 2006 No. 273 "On confirming the methodological guidelines concerning preparation and submission of Joint Implementation projects by legal entities"

This decree adopts the methodological guidelines on the preparation and submission of Joint Implementation projects by legal entities (for the full version in Russian please go to menr.gov.ua/documents/MENR_273_01.06.06.doc). Briefly, these guidelines provide a more detailed version of the procedure approved by Decree № 206 set out above. It is divided into eight subsections:

1. General
2. Main terms and definitions
3. Initiation of the process of project proposal preparation
4. Consideration of the procedural aspects of the JI mechanism when planning the project cycle
5. Information and recommendations on how to obtain the LoE
6. Information and recommendations on how to obtain the LoA
7. Recommendations on preparation of the project proposal for the JI project
8. Recommendations on preparation of the project documentation for the JI project

Decree of the Ministry of Environmental Protection of Ukraine of 17 July 2006 No. 341 "On confirming the requirements to the documents substantiating the amounts of anthropogenic emissions and removals of greenhouse gases for obtaining a Letter of Endorsement by the owner of an emissions source where a Joint Implementation project is planned to be implemented"

This document (the full version is available in Russian at menr.gov.ua/documents/MENR_341_17.07.06.doc) approves the requirements for the Project Idea Note (PIN) that should be submitted to the Designated Focal Point (Ministry of Environmental Protection of Ukraine [MEPU]) in order to obtain a Letter of Endorsement (LoE) for the planned project activity. The following documents should be submitted to MEPU to obtain the LoE:

- Written request from the project owner for issuance of an LoE
- Project Idea Note (both in on paper and in electronic form)
- Financial documents of the project owner (balance sheet and financial results for the last three years or an auditor's statement)

Conditions also exist under which an LOE/LOA for the project could be declined. This decree contains some annexes with the standard form of some documents that should be submitted along with the PIN to MEPU.

Decree of the Ministry of Environmental Protection of Ukraine of 17 July 2006 No. 342 "On confirming the requirements to preparation of Joint Implementation projects"

This document (the full version is available in Russian at menr.gov.ua/documents/MENR_342_17.07.06.doc) approves the general requirements for JI project development in Ukraine, particularly in the second phase, i.e. the preparation of the Project Design Document and its submission for approval to MEPU. The requirements to the preparation of JI projects establish a list of the documents and the general requirements for preparation, documentation and content of the information needed to obtain a Letter of Approval (LoA). The LoA for JI project realization is issued free of charge by MEPU on application by the emission source owner or any other authorized legal entity planning implementation of a JI project. The conditions under which an LOE/LOA for the project could be declined are also set out. The international standard PDD form provided in Annex 2 of this handbook will fulfil the requirements of MEPU. The decree contains some annexes with the standard form of documents that should be submitted along with the PDD to MEPU.

One of the most important laws in the JI sector will be the Law of Ukraine "On greenhouse gases", which is currently being drafted. The most important issue covered by this law will be ERU status.
The law will also determine the taxation procedures for emissions trading and other relevant issues. It will therefore be the most important one for foreign investment related to ERU purchases.

Administrative implementation of the orders and decrees discussed above is carried out by the following authorities (see Annex 3 for contact information):

1. Ministry of Environmental Protection of Ukraine

The Ministry of Environmental Protection of Ukraine (MEPU) is the authorized governmental body for ecology and natural resources.

The main tasks of the Ministry in connection with the fulfilment of the UNFCCC requirements and implementation of the Kyoto Protocol mechanisms are:

- Enforcement of the state policy on environmental protection and ecological safety
- Implementation of the complex control and regulation of environmental protection
- Enforcement of the laws and decrees on fulfilment of the requirements of the UNFCCC and the Kyoto Protocol

MEPU coordinates all Kyoto mechanism activities in Ukraine, including LoE and LoA issuance and it performs its activities as a Designated Focal Point, the special governmental body for JI project implementation authorized by the UNFCCC. All necessary documentation must therefore be directed to MEPU.

2. National Environmental Investment Agency of Ukraine

The Agency was created on 4 April 2007 with the aim of with the aim of supporting the state in the development of climate change policies. Since Ukraine has a great surplus of Assigned Amount Units (AAU), the Agency's main task is to implement and support the Green Investment Scheme in Ukraine. This scheme could become an additional focal point for international cooperation in the field of climate change mitigation in future.

The Agency's main tasks are:

- Development and submission of proposals to the Minister of Environmental Protection of Ukraine on state policies to regulate the negative anthropogenic impact on climate change, including fulfilment of the requirements of the United Nations Framework Convention on Climate Change and implementation of the Kyoto Protocol mechanisms, stimulation of investments in environmental protection and ensuring that policies are implemented in this field
- Creation of the National system for assessment and registration of anthropogenic emissions and absorption of greenhouse gases and development and realization of the activities aimed at mitigating climate change
- Establishment of cooperation, interaction and data exchange between domestic and foreign authorities and international organizations dealing with climate change issues
- Development and implementation of the activities to mitigate climate change by limiting anthropogenic emissions of greenhouse gases and protection and improvement in the quality of absorbers and carbon sequestration
- Preparation of the annual inventory of anthropogenic emissions and absorption of greenhouse gases and development of inventory reports

- Support of the inventory and registry of national anthropogenic emissions and absorption of GHG and archiving of GHG inventory documents

Some Ukrainian JI projects have already received approval by MEPU. An overview of the current portfolio of projects granted LoEs or LoAs by MEPU can be accessed on the MEPU website menr.gov.ua

ANNEX 1. CHECKLIST FOR THE SCREENING OF PROJECT IDEAS

Name of Project:
Date of Submission:

Project Pre Check (PPC) for JI Projects

Introduction

This Project Pre Check (PPC) has been developed for the pre-assessment of JI projects during the Expression of Interest (EoI) Phase. The enclosed handbook has been developed to provide explanations to the main items required by this PPC.

The PPC covers the information requirements of both the relevant Ukrainian authorities and potential authorities in the investor's country.

Every effort should be made to provide information which is as complete but brief as possible.

Contents

1. Project Brief

Summary	About one page
Name of project	
Objective	
Project description and proposed activities	

2. Project Owner

Details on Project Participants	(To be filled in for each participant separately – copy if needed)
Name of organization	
Core business / activity of the organization	
Address	
CEO of the organization	
Project coordinator (name)	
Position of the project coordinator	
E-mail address	
Fax	
No. of employees	
Legal status of the organization	
Last year's turnover and profit (in hryvnia)	
Production volumes (measured in physical units)	
Basic production units	

3. Project Details

3.1 General Information	
Project title	
Main objective	
Description of project background / intention to implement the project	

3.2 Location of Project	
Region / State / Province / City etc.	

3.3 Categories of Project Activity	
Project category (please tick)	□ Energy efficiency in thermal power plants □ Energy efficiency in industry □ Fuel substitution, e.g. in industrial facilities and building sector □ Energy efficiency projects for transmission and distribution system □ Combined heat and power (co-generation) systems □ Energy efficiency projects in the building sector, □ Renewable Energy:_____(type) □ Landfill methane capture, avoidance of mine gas, □ Waste management □ Other:_____(type)
Project type (please tick)	□ Modernization of existing structures (retrofit) □ Expansion of existing plant (brownfield) □ Construction of new plant (greenfield)

3.4 Technical Aspects	
The main technical aspects should be presented briefly (max. 2 pages) and should cover at least the following: Facilities to generate emission reductions; Description of technology, employed and associated risks (e.g. proven technology); Risks during project implementation and operation; Raw material and input supply; Expected development of capacity utilization and marketing of products	

3.5 Schedule	
Current project status (please tick)	□ Conceptual phase; □ Pre-Feasibility/Feasibility Study available; □ Tender placed; □ Consultant/Supplier contracts under negotiation etc.
Preparation / Licensing	From: _____ to: _____
Physical Implementation	From: _____ to: _____
Expected date of Commencement	
Project lifetime	From: _____ to: _____

4. Greenhouse Gas Reduction

4.1 Greenhouse Gases	
Greenhouse gases targeted for emission reductions by the project (please tick)	CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 □ □ □ □ □ □
Estimation of the project-specific greenhouse gas emissions in tonnes of CO_2 equivalent	PLEASE COMPLETE TABLE AS PER APPENDIX 1
Expected period of generation of emission reductions	

4.2 Baseline	
Baseline Approach	Please provide a brief description (max. one page) of the baseline scenario, i.e. what technology is likely to be used and an emissions scenario in the absence of the planned project. Include reasons for decision on crediting period.

4.3 Project Boundary	
Description	The project boundary defines which emissions sources, reduction measures and activities are to be considered in the emissions calculation. The project boundary is to be briefly described and illustrated.

4.4 Leakage	
Description	Leakage describes emissions taking place outside the defined project boundary as a direct consequence of the implementation of the proposed project, e.g. through changes in market or consumer behaviour. If leakages occur please provide a brief assessment of likely effects (max. half a page).

4.5 Additionality[2)]	
Environmental Additionality	Would the emission reductions expected from the proposed project not occur in the absence of the project?
Regulatory Additionality	Are the emission reductions expected to result from the proposed project in addition to what is required by law or regulation in the host country?

[2)] Presentation of the additionality of the project to a development without using JI considering national and/or sectoral outline conditions or policies.

5. Environmental Aspects

Environmental Aspects	
Environmental Impact Assessment (please tick)	If negative environmental effects occur please describe planned measures of mitigation and compensation (max. half a page.) □ required □ not required

6. Cost and Financing

6.1 Cost Schedule	
Expected cost of project implementation (total investment)	_____[EUR]
Current annual operating costs (indicate also period of reference)	_____[EUR]
Estimated annual operating costs after realization of the project	_____[EUR]
Current annual revenues (indicate also period of reference)	_____[EUR]

Estimated annual revenues (excl. emission reduction revenues) after realization of the project	_____ [EUR]

6.2 Financing	
Financing sources (equity/debt capital, financing institutions)	Equity (in % of total investment): _____ Debt (in % of total investment): _____ Grant (in % of total investment): _____ Involved financial institutions: _____ Financing status (debt and grants in total) - applied for (in % of total investment): _____ - under negotiation (in % of total investment): _____ - granted (in % of total investment): _____

ANNEX 1A. EMISSION REDUCTION CALCULATION SHEET

Calculating emission reductions from the activity level and emission factor*

[* See Notes on completing this table below]

Year	[enter base year here]	#WERT!	#WERT!	#WERT!	#WERT!	#WERT!	#WERT!	#WERT!
Project emissions								
Project activity level (MWh)								
Project emission factor (t CO2/MWh)		0	0	0	0	0	0	0
CO2 emissions from power generation/consumption (t CO2 equivalent)		0	0	0	0	0	0	0
Other GHG emissions (e.g. CH4, N2O,CFC,...)								
CH4 emissions in t								
Equivalence factor for converting CH4 to CO2 equivalent	21	21	21	21	21	21	21	21
N20 emissions in t								
Equivalence factor for converting N2O to CO2 equivalent	296	296	296	296	296	296	296	296
Emissions of ..... in t								
Equivalence factor for converting to CO2 equivalent								
Total emissions of other GHGs (t CO2 equivalent)	0	0	0	0	0	0	0	0
Leakage effects (where applicable)								
Total project emissions (t CO2 equivalent)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Baseline emissions								
Baseline activity level (MWh)								
Baseline emission factor (t CO2/MWh)								
CO2 emissions from power generation/consumption (t CO2 equivalent)	0	0	0	0	0	0	0	0
Other GHG emissions (e.g. CH4, N2O,CFC,...)								
CH4 emissions in t								
Equivalence factor for converting CH4 to CO2 equivalent	21	21	21	21	21	21	21	21
N20 emissions in t								
Equivalence factor for converting N2O to CO2 equivalent	296	296	296	296	296	296	296	296
Emissions of ..... in t								
Equivalence factor for converting to CO2 equivalent								
Total emissions of other GHGs (t CO2 equivalent)	0	0	0	0	0	0	0	0
Total baseline emissions (t CO2 equivalent)	0	0	0	0	0	0	0	0
Total anticipated annual emission reduction (t CO2 equivalent)	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Equivalence factors	
CO2	1
CH4	21
N20	296

This table is attached for information only. For technical reasons the Excel sheet for calculation is enclosed separately.

ANNEX 2. PDD FORM

JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM - Version 01

Joint Implementation Supervisory Committee

JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM
Version 01 - in effect as of: 15 June 2006

CONTENTS

JOINT IMPLEMENTATION PROJECT DESIGN DOCUMENT FORM - Version 01

Joint Implementation Supervisory Committee

SECTION A. General description of the project

A.1. Title of the project:

>>

A.2. Description of the project:

>>

A.3. Project participants:

>>

A.4. Technical description of the project:

A.4.1. Location of the project:

>>

A.4.1.1. Host Party(ies):

>>

A.4.1.2. Region/State/Province etc.:

>>

A.4.1.3. City/Town/Community etc.:

>>

A.4.1.4. Detail of physical location, including information allowing the unique identification of the project (maximum one page):

>>

A.4.2. Technology(ies) to be employed, or measures, operations or actions to be implemented by the project:

>>

A.4.3. Brief explanation of how the anthropogenic emissions of greenhouse gases by sources are to be reduced by the proposed JI project, including why the emission reductions would not occur in the absence of the proposed project, taking into account national and/or sectoral policies and circumstances:

>>

A.4.3.1. Estimated amount of emission reductions over the crediting period:

>>

A.5. Project approval by the Parties involved:

SECTION B. Baseline

B.1. Description and justification of the baseline chosen:

>>

B.2. Description of how the anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the JI project:

>>

B.3. Description of how the definition of the project boundary is applied to the project:

>>

B.4. Further baseline information, including the date of baseline setting and the name(s) of the person(s)/entity(ies) setting the baseline:

>>

SECTION C. Duration of the project / crediting period

C.1. Starting date of the project:

>>

C.2. Expected operational lifetime of the project:

>>

C.3. Length of the crediting period:

>>

SECTION D. Monitoring plan

D.1. Description of monitoring plan chosen:

>>

D.1.1. Option 1 – Monitoring of the emissions in the project scenario and the baseline scenario:

D.1.1.1. Data to be collected in order to monitor emissions from the project, and how these data will be archived:								
ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.1.2. Description of formulae used to estimate project emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):

>>

D.1.1.3. Relevant data necessary for determining the baseline of anthropogenic emissions of greenhouse gases by sources within the project boundary, and how such data will be collected and archived:								
ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment
D.1.1.4. Description of formulae used to estimate baseline emissions (for each gas, source etc.; emissions in units of CO_2 equivalent):								

D. 1.2. Option 2 – Direct monitoring of emission reductions from the project (values should be consistent with those in section E.):

D.1.2.1. Data to be collected in order to monitor emission reductions from the project, and how these data will be archived:								
ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.2.2. Description of formulae used to calculate emission reductions from the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent):

>>

D.1.3. Treatment of leakage in the monitoring plan:

D.1.3.1. If applicable, please describe the data and information that will be collected in order to monitor leakage effects of the project:								
ID number *(Please use numbers to ease cross-referencing to D.2.)*	Data variable	Source of data	Data unit	Measured (m), calculated (c), estimated (e)	Recording frequency	Proportion of data to be monitored	How will the data be archived? (electronic/ paper)	Comment

D.1.3.2. Description of formulae used to estimate leakage (for each gas, source etc.; emissions in units of CO_2 equivalent):

>>

D.1.4. Description of formulae used to estimate emission reductions for the project (for each gas, source etc.; emissions/emission reductions in units of CO_2 equivalent):

>>

D.1.5. Where applicable, in accordance with procedures as required by the host Party, information on the collection and archiving of information on the environmental impacts of the project:

>>

D.2. Quality control (QC) and quality assurance (QA) procedures undertaken for data monitored:		
Data *(Indicate table and ID number)*	Uncertainty level of data (high/medium/low)	Explain QA/QC procedures planned for these data, or why such procedures are not necessary.

D.3. Please describe the operational and management structure that the project operator will apply in implementing the monitoring plan:

>>

D.4. Name of person(s)/entity(ies) establishing the monitoring plan:

>>

SECTION E. Estimation of greenhouse gas emission reductions

E.1. Estimated project emissions:

>>

E.2. Estimated leakage:

>>

E.3. The sum of E.1. and E.2.:

>>

E.4. Estimated baseline emissions:

>>

E.5. Difference between E.4. and E.3. representing the emission reductions of the project:

>>

E.6. Table providing values obtained when applying formulae above:

>>

SECTION F. Environmental impacts

F.1. Documentation on the analysis of the environmental impacts of the project, including transboundary impacts, in accordance with procedures as determined by the host Party:

>>

F.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to supporting documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party:

>>

SECTION G. Stakeholders' comments

G.1. Information on stakeholders' comments on the project, as appropriate:

>>

Annex 1

CONTACT INFORMATION ON PROJECT PARTICIPANTS

Organization:	
Street/P.O.Box:	
Building:	
City:	
State/Region:	
Postal code:	
Country:	
Phone:	
Fax:	
E-mail:	
URL:	
Represented by:	
Title:	
Salutation:	
Last name:	
Middle name:	
First name:	
Department:	
Phone (direct):	
Fax (direct):	
Mobile:	
Personal e-mail:	

Annex 2

BASELINE INFORMATION

Annex 3

MONITORING PLAN

ANNEX 3 ADDRESSES OF MARKET PARTICIPANTS FOR IMPLEMENTATION OF JI PROJECTS IN UKRAINE

ANNEX 3 ADDRESSES OF MARKET PARTICIPANTS FOR IMPLEMENTATION OF JI PROJECTS IN UKRAINE

gives an extensive overview of the relevant market participants for successful implementation of JI projects. Special emphasis was given to their relevance for the Ukrainian market.

The players in the JI project markets were grouped according to their tasks in the JI project cycle: official authorities in Ukraine and Germany and also at UN level, carbon funds and certain banks; consultancy firms for technical and financial assistance in preparation of JI projects in Ukraine and officially accredited verifiers.

1. Official authorities

Name	Address	Online Contact
United Nations Framework Convention on Climate Change - UNFCCC	Martin-Luther-King-Str. 8 51375 Bonn Germany Phone: +49 228 815 1000, Fax: +49 228 815 1999	www.unfccc.int secretariat@unfccc.int
Ministry of Environmental Protection of Ukraine	Uritzkogo, 35 03035, Kyiv, Ukraine Phone: +38 044 206 3100 Fax : +38 044 206 3107	www.menr.gov.ua secr@menr.gov.ua
National Environmental Investment Agency	Uritzkogo, 35 03035, Kyiv, Ukraine Phone: +38 044 206 3311 Fax : +38 044 206 3191	
Deutsche Emissionshandelsstelle (DEHST) (A department of the Federal Environment Agency)	Umweltbundesamt Deutsche Emissionshandelsstelle Bismarckplatz 1 14193 Berlin Germany Phone: +49 30 8903 5050 Fax: +49 30 8903 5010	www.dehst.de emissionshandel@uba.de
Federal Ministry of Environment, Nature Conservation and Nuclear Safety	Franzjosef Schafhausen Leiter der Interministeriellen Arbeitsgruppe „CO2-Reduktion“	www.bmu.de Franzjosef.Schafhausen@bmu.bund.de Thomas.Forth@bmu.bund.de

Name	Address	Online Contact
(political support and development of project portfolios)	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit Alexanderstr. 3 10178 Berlin Germany Tel. +49 30 28550 3660 Thomas Forth Joint Implementation Koordinierungsstelle (JIKO) Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit Alexanderstr. 3 10178 Berlin Germany Tel. +49 30 28550 3668	

2. Carbon funds and banks

Many of the carbon funds are related to banks and are also able to provide financing for the projects in addition to ERUs. The three banks given as examples are not backed by carbon funds, but are able to acquire ERUs as a commodity. The carbon funds and banks are listed in alphabetical order.

Name	Address	Online Contact
The Asia Carbon Fund	Asia Carbon International B.V. 150 Cecil Street # 10-03 069543 Singapore Singapore Phone: +65 6225 1791 Fax: +65 6225 1562	www.asiacarbon.com
Baltic Sea Testing Ground Facility – Nordic Environment Finance Cooperation (NEFCO)	Mr Ash Sharma, Programme Manager or Mrs Janika Blom, Legal Counsel Testing Ground Facility c/o NEFCO P.O.Box 249 FIN-00171 Helsinki Finland Tel: +358 400 811 327 Fax: +358 9 1800 476	www.nefco.fi ash.sharma@nefco.fi
Belgian JI/CDM Tender	Climate Change Section of the Belgian Federal Administration Tine Heyse or Sophie Closson Environment DG Place Victor Horta 40–Box 10 1060 Brussels Belgium Tel: +32 2 524 95 31 Fax: +32 2 524 96 01	www.klimaat.be/jicdmtender/ jicdmtender@health.fgov.be
Climate Change Capital Carbon Fund	Climate Change Capital Ltd. 49 Grosvenor Street London W1K 3HP Great Britain	jburnham@c-c-capital.com www.climatechangecapital.com

Name	Address	Online Contact
	Phone: +44 20 7290 8618 Fax: +44 20 7290 7041	
Danish Carbon.dk	Ministry of Environment Danish Environmental Protection Agency Climate Change & Environmental Assistance Strandgade 29 DK-1401 Copenhagen K. Denmark Direct phone: +45 32 66 01 00 Direct Fax: +45 32 66 04 79	www.danishcarbon.dk info@DanishCarbon.dk
The Nederland EBRD – Carbon Fond	EBRD One Exchange Square London EC2A 2JN United Kingdom	www.ebrd.com
ERUPT (Emisson Reduction Unit Procurement Tender) **CERUPT (Certified Emission Reduction Unit Procurement Tender)**	Senter Novem Utrecht Catharijnesingel 59 3511 GG Utrecht P.O.Box 8242 3503 RE Utrecht Phone: +31 30 239 3753 Fax: +31 30 231 6491	http://www.senternovem.nl/carboncredits/index.asp carboncredits@senternovem.nl
European Carbon Fond	European Carbon Fund 12, Avenue de la Liberté, 1930 Luxembourg Luxembourg Phone: +33 15855 6619 Fax: +33 15855 6699	www.europeancarbonfund.com gqueru@ixis.cib.com
Finland: CDM/JI Programm	Merikasarmi, P.O.Box 176 00161 Helsinki Finland Tel: +358 9 160 05 or 578 15	http://www.ymparisto.fi/default.asp?contentid=164100&lan=en
Japan Carbon Finance (JCF)	Japan Carbon Finance Ltd. 1-3 Kudankita 4-chome, 102-0073 Chiyoda-Ku Tokyo Japan Phone: +81 3 5212 8870 Fax: +81 3 5212 8886	www.jcarbon.co.jp j-kimura@jcarbon.co.jp
KfW - "Klimaschutz Fond" **(The KfW Carbon Fund)**	KfW Förderbank P.O.Box: 11 11 41 60046 Frankfurt am Main Germany Phone: +49 69 7431 0 Fax: +49 69 7431 2944	http://www.kfw-foerderbank.de/EN_Home/Carbon_Fund/index.jsp
Kommunalkredit Public Consulting	Kommunalkredit Public Consulting GmbH Türkenstraße 9 1090 Wien Austria Phone: +43 1 316310 Fax: +43 1 31631104	w.diernhofer@kommunalkredit.at kyoto@kommunalkredit.at www.public-consulting.at www.Klimaschutzprojekte.at
SPAIN FC2E FUND	SPAIN FC2E FUND (ICO and Santander Investment promoters), Paseo del Prado 4, 28014 Madrid Spain	Carlos.echevarria@ico.es www.fc2e.com

Name	Address	Online Contact
	Phone: +34 91 5921879 Fax: +34 91 2891194	
Stiftung Klimarappen	Stiftung Klimarappen Freiestrasse 167 8032 Zürich Switzerland Phone: +41 44 387 9900 Fax: +41 44 387 9909	info@stiftungklimarappen.ch www.stiftungklimarappen.ch
World Bank Prototype Carbon Fund	World Bank Group 1818 H St. NW, Washington, DC 20433 USA Phone: +1 202 473 5423 Fax: +1 202 676 0977	ccormier@worldbank.org www.carbonfinance.org

Banks

Calyon Bank	Volodymyrska, 23a 01034, Kyiv, Ukraine Phone: +38 044 490 1440 Fax : +38 044 490 1404	www.calyon.kiev.ua olexiy.nikolayenko@ua.calyon.com vladislav.berezhny@ua.calyon.com
Deutsche Bank AG	Deutsche Bank Sustainability and Environmental Coordination Roßmarkt 18 60262 Frankfurt am Main Germany	mailbox.environment@db.com www.deutsch-bank.de
Dresdner Bank	Dresdner Bank AG Dresdner Kleinwort Wasserstein Theodor-Heuss-Allee 44-46 60486 Frankfurt am Main Germany Phone: +49 69 713 15323 Fax: +49 69 713 25028	www.drkw.com angela.lotz@drkw.com
European Bank for Reconstruction and Development	Sofievska, 27/23 01001, Kyiv, Ukraine Phone: +38 044 270 6132 Fax : +38 044 270 6813	www.ebrd.com witaka@ebrd.com gajdag@ebrd.com
Standard Bank	Standard Bank Plc 25 Dowgate Hill London EC4R 2SB Great Britain Phone: +44 20 7815 3000	www.standardbank.com
WestLB AG Representative Office	B. Khmelnytskogo, 52 01030, Kyiv, Ukraine Phone: +38 044 490 2487 Fax : +38 044 230 2671	www.westlb.de igor_potapov@westlb.de
World Bank	Dniprovskiy uzviz, 1 01010, Kyiv, Ukraine Phone: +38 044 490 6671 Fax : +38 044 490 6670	www.worldbank.org aslenzak@worldbank.org dglazkov@worldbank.org

3. Consultants

This list includes German, Ukrainian and international consultancies in the field of JI project implementation relevant for the development of JI projects in Ukraine. The consultancy services offered range from financial consultancy through project consultancy to purely technical consultancy.

Name	Address	Online Contact
Ukraine		
Ecofys	Lypska, 16, room 105 01021, Kyiv, Ukraine	Tetyana Skarshevska Phone: +38 044 205 0218 Fax : +38 044 253 8262 E-mail: t.skarshevska@ecofys.com Web: www.ecofys.com
Global Carbon Ukraine LLC	Velyka Zhytomyrska, 16, Office 1; 01025, Kyiv, Ukraine	Representative Mr. Yevgeniy Yesirkenov Phone: +38 044 200 0415 Fax : +38 044 200 0416 E-mail: yesirkenov@global-carbon.com Web: www.global-carbon.com
Institute of Ecology and Energy Saving Problems	Kotovskogo, 11 04060, Kyiv, Ukraine	Director Mr. Sergey Ermilov Phone: +38 044 206 4940 Fax : +38 044 206 4940 E-mail: ipee@ipee.org.ua Web: www.ipee.org.ua
Institute of Engineering Ecology	Zhelyabova, 2a, Office 423; 03057, Kyiv, Ukraine	Director Dr. Alexander Sigal Phone: +38 044 453 2862 Fax : +38 044 456 9262 E-mail: engeco@kiev-page.com.ua Web: www.engecology.com
SEC Biomass LLC	Zhelyabova, 2a, Office 232; 03057, Kyiv, Ukraine	Director Dr. Georgiy Geletukha Phone: +38 044 456 9462 Fax : +38 044 453 2856 E-mail: info@biomass.kiev.ua; geletukha@biomass.kiev.ua Web: www.biomass.kiev.ua
Germany		
Deutsche Energie-Agentur GmbH (dena) - the German Energy Agency	Deutsche Energie-Agentur GmbH (dena) Chausseestraße 128 a 10115 Berlin Germany Phone: +49 30 7261 65 600 Fax: +49 30 7261 65 699	info@dena.de www.dena.de
Ecofys GmbH	Ecofys GmbH Eupener Str. 59, 50933 Köln Germany Phone: +49 221 510907 0	info@ecofys.de www.ecofys.de

Name	Address	Online Contact
	Fax: +49 221 510907 49	
Fichtner	Fichtner GmbH & Co. KG Sarweystr. 3 70191 Stuttgart Germany Phone: +49 711 8995 746 Fax: +44 711 8995 459	wahleh@fichtner.de www.klimahandel.info
Future Camp	Future Camp GmbH Chiemgaustr. 116 81549 München Germany Phone: +49 89 68008330 Fax: +49 711 68008333	info@future-camp.de www.future-camp.de
GFA	GFA Consulting Group Dep: GFA Envest Eulenkrugstr. 82 22359 Hamburg Germany Phone: +49 40 60306145 Fax: +49 40 60306149	ksenia.brockmann@gfa-gruop.de www.gfa-envest.de
Lahmeyer International	Lahmeyer International GmbH Friedberger Straße 173 61118 Bad Vilbel Germany Phone: +49 6101 551262 Fax: +49 6101 551808	info@lahmeyer.de www.lahmeyer.de
Perspectives	Perspectives GmbH Bei der Apostelkirche 24 20257 Hamburg Germany Phone: +49 179 4573616 Fax: +49 89 1488280822	info@perspectives.cc www.perspectives.cc
Pro2 Anlagentechnik GmbH	Pro2 Anlagentechnik GmbH Schmelzerstraße 25 47877 Willich Germany Phone: +49 2154 488 111 Fax: +49 2154 488 105	s.rios@pro-2.de www.pro-2.net
3C Climate Change Consulting	3C Climate Change Consulting GmbH Hanauer Landstr. 521 60386 Frankfurt am Main Germany Phone: +49 69 420889813 Fax: +49 69 42088989	info@3c-company.com www.3c-company.com
500ppm	500 PPM GmbH Emmy-Noether-Str. 9 76131 Karlsruhe Germany Phone: +49 721 6105 530 Fax: +49 721 6105 535	info@500ppm.com www.500ppm.com
Other Countries		
Asja Ambiente Italia	Asja Ambiente Italia S.p.A. Via Ivrea 70, 10098 Rivoli (TO) Italy Phone: +39 11 9579211 Fax: +39 11 9579280	br@asja.biz www.asja.biz
Camco International Ltd.	Camco International Ltd. Carbon Asset Management	info@camco-international.com www.camco-international.com

Name	Address	Online Contact
	International AG 47, The Esplanade, St. Helier Jersey JE1 0BD Great Britain Phone: +44 20 7256 7979 Fax: +49 20 7382 0369	
The Carbon Neutral Company	The Carbon Neutral Company 20 Flaxman Terrace London WC1H 9AT Great Britain Phone: +44 8701 99998 Fax: +44 207 383 7627	bill.sneyd@carbonneutral.com www.carbonneutral.com
Carbon Support	Carbon Support Att. Grue & Hornstrup A/S Nupark 51, DK 7500 Holstebro Denmark Phone: +45 9610 1341 Fax: +45 9610 1349	info@carbonsupport.com www.carbonsupport.com
Carbon Ventures	Carbon Ventures 213 Carnegie Centre, Princeton New Jersey, 08540 6284 USA Phone: +1 6092439811 Fax: +1 6092430321	mscott@environcorp.com www.carbonventures.com
EcoRessources	EcoRessources Consultants 825 rue Raoul-Jobin Quebec-City, G1N 1S6 Canada Phone: +1 514 5705093	Frederic.gagnon-lebrun@ ecoressources.com www.ecoressources.com
EcoSecurities Ltd.	EcoSecurities Ltd. Park Central, 40/41 Park End Str. Oxford OX1 1JD Great Britain Phone: +44 1865202635 Fax: +44 1865251438	info@ecosecurities.com www.ecosecurities.com
Evolution Markets	Evolution Markets LLC 10 Bank Street White Plains, NY 10606, USA Phone: +1 9143230200 Fax: +1 9143283701	evan@southardinc.com www.evomarkets.com
E3 Europe	E3 Europe 3 The Street Alderton Chippenham Wilts SN 6NL Great Britain Phone: +44 1666 841 447	andyk@e3international.com www.e3international.com
greenstream network	Norbert Heidelmann Tel: +49 221 9424 332	www.greenstream.net norbert.heidelmann@ greenstream.net
mgm International	mgm International 801 Brickell Key Dr. Suite 202 Miami, FL 33131 USA Phone: +49 1 768 425 9251 Fax: +49 1 305 675 0968	mariapiai@mgminter.com www.mgminter.com
Mott MacDonald	Mott MacDonald Victory House Trafalgar Place Brighton BN1 4FY Great Britain	Philip.Napier-Moore@mottmac. com www.mottmac.com

Name	Address	Online Contact
	Phone: +44 1273 865 222	
Natsource LLC	Natsource LLC 100 William Street, Suite 2005 NY 10038 New York, USA Phone: +1 212 232 5305 Fax: +1 202 4961416	tsheenan@natsource.com www.natsource.com
Point Carbon	Point Carbon P.O. Box: 7120 St. Olav N-0130 Oslo Norway Phone: +47 22 405340 Fax: +47 22 405341	contact@pointcarbon.com www.pointcarbon.com
PricewaterhouseCoopers Advisory N.V.	PricewaterhouseCoopers Advisory N.V. P.O. Box: 85096 3508 AB Utrecht The Netherlands Phone: +31 30 2194678 Fax: +31 30 2195115	hans.schoolderman@nl.pwc.com www.pwc.com
Quality Tonnes	Quality Tonnes 818 Aspen Street N.W. Washington D.C. 20012 USA Phone: +1 202 518 9809 Fax: +1 202 882 0056	sbaruch@qualitytonnes.com www.qualitytonnes.com
SenterNovem	SenterNovem Carboncredits.nl Juliana van Stolberglaan 3 2509 AC Den Haag The Netherlands Phone: +31 70 3735 495 Fax: +31 70 3735 000	carboncredits@senternovem.nl www.carboncredits.nl

4. Determinators and Verifiers

The following table gives a complete list of accredited determinators and verifiers.

Name	Address	Online-Contact
AENOR Spanish Association for Standardization and Certification	Genova 6, 28004 Madrid Spain	www.aenor.es
Bureau Veritas Quality International Holding S.A. (BVQI Holding S.A.)	Bureau Veritas Quality International Holding S.A. Tower Bridge Court 224-226 Tower Bridge Road London SE1 2TX United Kingdom	marcio.viegas@es.bureauveritas.com
British Standards Institution (BSI)	BSI Group Press Office British Standards House 389 Chiswick High Road London W4 4AL United Kingdom	http://www.bsi-global.com/
Det Norske Veritas B.V. (DNV)	Haastrechtstraat 7 3079 DC Rotterdam	www.dnv.com birgit.hess@dnv.com

Name	Address	Online-Contact
	The Netherlands Phone: +31 102922774 Fax: +49 201729611201	
JACO CDM.,LTD (JACO)	Address Bldg. 2-19 Akasaka 2-chome, Minato-ku, Tokyo # 107-0052 Japan Phone: +81 3 5572 1721	www.jaco-cdm.com ootsuka@jaco.co.jp
Japan Consulting Institute (JCI)	Sumitomo Fudosan Kudanshita Bldg. 3F, Kanda-Jinbocho 3-5, Tokyo #101-0051 Japan Tel: +81 3 3263 0318	http://jci-plant.or.jp/english/index.htm cdm@jci-plant.or.jp
Japan Quality Assurance Organization (CDM Department)	Mitsubishi Building, 2-5-2, Marunouchi, 100-8308, Chiyoda-Ku, Tokyo, Japan Phone : +81 3 6212 9333, Fax : +81 3 6212 9334	www.jqa.jp cdm@jqa.jp
The Korea Energy Management Corporation (KEMCO)	1157, Pungdeokchon-2-dong. Yongin, Gyeonggi 449-994, Rep. of Korea Tel.: + 82-31-260-4453 Fax.: + 82-31-260-4459	http://www.kemco.or.kr/
KPMG Sustainability BV	Burgemeester Rijnderslaan 10, 1185 MC Amstelveen The Netherlands Phone: +31 20 656 4503, Fax: +31 20 656 4510	www.kpmg.nl/sustainability habbitts.stirling@kpmg.nl
PricewaterhouseCoopers - South Africa (PwC)	PricewaterhouseCoopers Advisory N.V., P.O. Box 85096, 3508 AB Utrecht, The Netherlands Tel:+27 11 797 4732 Fax:+27 11 209 4732	http://www.pwc.com/ Harmke Immink
SGS United Kingdom LTD.	217-221 London Road, Camberley GU15 3EY, Great Britain Phone: +44 1276 697810, Fax: +44 1276 697888	www.climatechange.sgs.com ukclimatechange@sgs.com
Tohmatsu Evaluation and Certification Organization Co., Ltd.(TECO)	Phone: +81 3 3769 4143	hiroshi.inanaga@tohmatsu.co.jp
TÜV NORD CERT GmbH (RWTUV)	TÜV NORD AG Am TÜV 1 30519 Hannover Germany Tel. +49 511 986 0 Fax +49 511 986 1237	www.tuev-nord.de info@tuev-nord.de
TÜV Rheinland	Am Grauen Stein 51105 Köln Germany Phone : +49 221 806 0, Fax : +49 221 806 114	www.tuv.com
TÜV SÜD Gruppe	Westendstraße 199 80686 München Germany Phone: +49 89 5791 2179, Fax: +49 89 5791 2756	www.tuev-sued.de

ANNEX 4. APPROVED BASELINE AND MONITORING METHODOLOGIES RELEVANT FOR THE UKRANIAN JI MARKET

Fehler! Verweisquelle konnte nicht gefunden werden. gives an overview of the methodologies approved by the UNFCCC which could have relevance for the Ukrainian JI market. At present, only methodologies for CDM projects exist, but it is expected that these methodologies will also be fully valid for JI projects in future. The complete list of methodologies including their history and the corresponding verifying "Designated Operational Entities" (DOEs) is updated regularly and available from the UNFCCC website http://cdm.unfccc.int/methodologies/

The individual methodologies are available on this website under the corresponding methodology number (e.g. ACM0002) given in the table below:

Name of the Methodology	Meth. No.	Type of Methodology
Sectoral Scope: (1) Energy Industries (renewable / non-renewable sources)		
Consolidated methodology for grid-connected electricity generation from renewable sources - Version 6	ACM0002	Large Scale – consolidated
Consolidated methodology for waste gas and/or heat for power generation - Version 2	ACM0004	Large Scale – consolidated
Consolidated methodology for grid-connected electricity generation from biomass residues - Version 3	ACM0006	Large Scale – consolidated
Methodology for conversion from single cycle to combined cycle power generation	ACM0007	Large Scale – consolidated
Consolidated methodology for industrial fuel switching from coal or petroleum fuels to natural gas - Version 3	ACM0009	Large Scale – consolidated
Analysis of the least-cost fuel option for seasonally-operating biomass cogeneration plants	AM0007	Large Scale
Landfill gas capture and electricity generation projects where landfill gas capture is not mandated by law	AM0010	Large Scale
Natural gas-based package cogeneration - Version 2	AM0014	Large Scale
Renewable energy project activities replacing part of the electricity production of one single fossil-fuel-fired power plant that stands alone or supplies electricity to a grid, excluding biomass projects - Version 2	AM0019	Large Scale
Methodology for greenhouse gas reductions	AM0024	Large Scale

Name of the Methodology	Meth. No.	Type of Methodology
through waste heat recovery and utilization for power generation at cement plants		
Methodology for Grid Connected Electricity Generation Plants using Natural Gas	AM0029	Large Scale
Methodology for waste gas or waste heat based cogeneration system	AM0032	Large Scale
Grid connected renewable electricity generation	AMS-I.D.	Small Scale (simplified procedure)
Supply side energy efficiency improvements – generation	AMS-II.B.	Small Scale (simplified procedure)
Switching fossil fuels	AMS-III.B.	Small Scale (simplified procedure)
Sectoral Scope: (2) Energy Distribution		
Supply side energy efficiency improvements – transmission and distribution	AMS-II.A.	
Sectoral Scope: (3) Energy Demand		
Steam system efficiency improvements by replacing steam traps and returning condensate - Version 2	AM0017	Large Scale
Steam optimization systems	AM0018	Large Scale
Baseline methodology for water pumping efficiency improvements	AM0020	Large Scale
Demand-side energy efficiency programmes for specific technologies	AMS-II.C.	Small Scale (simplified procedure)
Energy efficiency and fuel switching measures for buildings	AMS-II.E.	Small Scale (simplified procedure)
Energy efficiency and fuel switching measures for agricultural facilities and activities	AMS-II.F.	Small Scale (simplified procedure)
Sectoral Scope: (4) Manufacturing Industries		
Emissions reduction through partial substitution of fossil fuels with alternative fuels in cement manufacture - Version 4	ACM0003	Large Scale – consolidated
Consolidated methodology for increasing the blend in cement production - Version 3	ACM0005	Large Scale – consolidated
Use of non-carbonated calcium sources in the raw mix for cement processing	AM0033	Large Scale
Energy efficiency and fuel switching measures for industrial facilities	AMS-II.D.	Small Scale (simplified procedure)
Sectoral Scope: (5) Chemical Industries		
Baseline Methodology for decomposition of N2O from existing adipic acid production plants	AM0021	Large Scale
Substitution of CO2 from fossil or mineral origin by CO2 from renewable sources in the production of inorganic compounds	AM0027	Large Scale
Catalytic N2O destruction in the tail gas of Nitric Acid Plants	AM0028	Large Scale

Name of the Methodology	Meth. No.	Type of Methodology
Catalytic reduction of N2O inside the ammonia burner of nitric acid plants	AM0034	Large Scale
Sectoral Scope: (8) Mining/mineral Production		
Consolidated methodology for coal bed methane and coal mine methane capture and use for power (electrical or motive) and heat and/or destruction by flaring - Version 2	ACM0008	Large Scale - consolidated
Sectoral Scope: (9) Metal Production		
PFC emission reductions from anode effect mitigation at primary aluminium smelting facilities	AM0030	Large Scale
Sectoral Scope: (10) Fugitive emissions from fuels (solid, oil and gas)		
Recovery and utilization of gas from oil wells that would otherwise be flared - Version 2	AM0009	Large Scale
Leak reduction from natural gas pipeline compressor or gate stations	AM0023	Large Scale
Methane recovery in agricultural and agro industrial activities	AMS-III.D.	Small Scale (simplified procedure)
Sectoral Scope: (11) Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride		
Incineration of HFC 23 Waste Streams - Version 4	AM0001	Large Scale
Sectoral Scope: (13) Waste handling and disposal		
Consolidated methodology for landfill gas project activities - Version 4	ACM0001	Large Scale - consolidated
Greenhouse gas emission reductions through landfill gas capture and flaring where the baseline is established by a public concession contract - Version 2	AM0002	Large Scale
Simplified financial analysis for landfill gas capture projects --- Version 3	AM0003	Large Scale
Landfill gas recovery with electricity generation and no capture or destruction of methane in the baseline scenario - Version 2	AM0011	Large Scale
Avoided methane emissions from organic waste-water treatment --- Version 3	AM0013	Large Scale
Avoided Wastewater and On-site Energy Use Emissions in the Industrial Sector - Version 3	AM0022	Large Scale
Avoided emissions from organic waste through alternative waste treatment processes - Version 3	AM0025	Large Scale
Landfill methane recovery	AMS-III.G.	Small Scale (simplified procedure)
Methane recovery in wastewater treatment	AMS-III.H.	Small Scale (simplified procedure)
Sectoral Scope: (15) Agriculture		
Methane recovery in agricultural and agro industrial activities	**AMS-III.D**	Small Scale (simplified procedure)
Consolidated methodology for GHG	**ACM0010**	Large Scale - consolidated

Name of the Methodology	Meth. No.	Type of Methodology
emission reductions from manure management systems		