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SUMMARY REPORT:

USELF SER STAKEHOLDER ENGAGEMENT AND PUBLIC CONSULTATION

Submitted to:

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Submitted by:

BLACK & VEATCH
Building a world of difference.®

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USELF
Ukraine Sustainable Energy Lending Facility

USELF SER STAKEHOLDER ENGAGEMENT AND PUBLIC CONSULTATION

Prepared by

Black & Veatch

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LIST OF ABBREVIATIONS

EBRD	European Bank for Reconstruction and Development
EC	European Community
EIA	Environmental Impact Assessment
EU	European Union
NGO	Non-governmental organization
OVOS	National EIA procedure (also OVNS)
PP	Plan and program
PR	Performance Requirement
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SER	Strategic Environmental Review
TBI	To be identified
USELF	Ukraine Sustainable Energy Lending Facility

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1. INTRODUCTION AND BACKGROUND

In order to encourage businesses to pursue sustainable energy projects, the European Bank for Reconstruction and Development (EBRD) has launched the Ukraine Sustainable Energy Lending Facility (USELF). The USELF is aimed at providing development support and debt finance to renewable energy projects in Ukraine, which meet required commercial, technical and environmental standards.

In co-operation with the Ukraine's national authorities, the USELF has commissioned a Strategic Environmental Review (SER) focusing on renewable energy technologies in selected areas of the Ukraine. The purpose of the SER is to identify key environmental issues associated with renewable energy projects and provide a source of environmental and social data relevant to guide and inform later environmental reviews of specific projects.

The SER evaluates the impacts of developing renewable energy projects on environmental resources, communities, and the economy. It also identifies strategies to avoid, minimize, and mitigate those impacts while moving projects forward.

The SER was developed in compliance with the EBRD's Environmental and Social Policy and its Public Information Policy as well as being guided by the EU SEA Directive.

EBRD considers stakeholder engagement as an essential part of good business practices and corporate citizenship, and a way of improving the quality of projects. In particular, effective community engagement is central to the successful management of risks and impacts on communities affected by projects, as well as to achieving enhanced community benefits.

The USELF Stakeholder and Public Consultation process was specifically governed by EBRD's Environmental and Social Policy Performance Requirement 10 "Information Disclosure and Stakeholder Engagement" (PR10), which stipulates the requirements for information disclosure and stakeholder engagement.

2. ORGANIZATION OF STAKEHOLDER ENGAGEMENT AND CONSULTATION PROCESS

The stakeholder engagement and public consultation has been ongoing throughout the USELF SER cycle, starting from the scoping process and continuing throughout the SER process. **Figure 1** schematically illustrates the overall organization of the USELF SER and stakeholder consultation processes.

Figure 1: USELF SER and stakeholder consultation process

USELF SER stakeholder engagement and consultation process started with the initial scoping consultations in November 2010. The main objectives of scoping consultations were to identify key USELF SER stakeholders (local authorities, NGOs, local businesses, academia and public) and, in part, through the initial rounds of consultations with them to identify environmental and socioeconomic issues, associated with the implementation of the USELF program. During scoping consultations, our consultation team disclosed information about the USELF program and USELF SER project and established working relationships with main stakeholder groups for further meaningful consultations and dialogue. As a result of scoping consultations, the SER Scoping report and Stakeholder Engagement Plan (SEP) were developed. The SEP was aimed to map out the strategy for engaging the various stakeholder groups and public in the activities of the USELF SER. The SEP described the national and EBRD requirements for stakeholder engagement and public consultation, defined key USELF SER stakeholders, public and other interested groups. It also set the scope and timescales for further consultation throughout the SER and defined the grievance mechanism for SER process.

The second stage of the USELF SER stakeholder consultation process, the formal 120 days SER Environmental Report consultations, began in January 2012. The primary goals of these consultations were to disclosure the information about the USELF SER Environmental Report, to inform stakeholders that the report is publically available for review on the EBRD home webpage and USELF SER website and to encourage them to submit their comments, express concerns/opinions about the report. During this stage, our consultation team organized five regional public meetings to disclose the report and its outcomes, to collect feedback and discuss the pros and cons of the SER project. All comments, concerns and other grievances received from stakeholders have been registered, noted, reviewed and properly responded. Some comments were reflected in necessary corrections and changes to the SER Environmental Report. The formal 120 day SER consultation period has concluded in May, 2012.

2.1 STAKEHOLDER CONSULTATIONS DURING SCOPING

Stakeholders were identified prior to the initial site visit, as well as via referrals during stakeholders' interviews. USELF SER Project Overview flyer describing the USELF SER was circulated to key organisations and stakeholders in December 2010, along with a request for available data to inform the SER. The English and Ukrainian language

versions of the flyer are provided in **Attachment A**. The interviews, meetings, and consultations were performed by combined Black & Veatch and Ecoline EA Centre teams. All team members were engaged in the stakeholder meetings and interviews. In total, the team interviewed 51 stakeholders, including 12 stakeholders in Crimea and 11 in the western part of Ukraine (Lviv area). **Attachment B** contains a summary of feedback on the USELF SER received from interviewed stakeholders.

A public USELF SER website (www.uself-ser.com) has been developed where information and guidance was made available to all stakeholders and where details on the scoping study, the SEP, the SER, and public meetings were placed.

During the scoping consultations, the following information was disclosed to the identified stakeholders:

- A summary of the USELF SER process, defining the main goals of SER and the way the stakeholder engagement and consultation process will be structured (hard and electronic copies of the USELF SER flyer in English and Ukrainian).
- A brief summary of the USELF SER Project and its current status
- The SER Scoping Report was made available through the USELF SER website at www.uself-ser.com, as well as on CD on individual request.

The USELF SER stakeholders are represented by a number of groups, including central authorities, local and regional authorities, other regulators, NGOs, and academic institutions and organizations.

Several reoccurring topics were, explicitly or implicitly, discussed during most of the consultations. General comments, expectations and concerns in relation to the environmental and social issues surrounding renewable energy are summarised below.

General comments

- In general, comments and attitudes towards renewable energy sources were positive;
- It will be necessary to take the interest of local communities into account when developing projects supported by USELF; and
- A systematic approach towards regional planning is needed to facilitate renewable energy projects in Ukraine.

Expectations

- Capacity building[1] and targeted information dissemination on EBRD procedures, practices, requirements is needed;
- Renewable energy projects could serve as focal points for underdeveloped rural or small urban areas;
- Projects supported by USELF might (indirectly) facilitate technological development; and
- The SER materials and reports should be made available to the professional community.

Concerns

- Possible negative environmental impacts of renewable projects were raised, specifically:

[1] Capacity building refers to assistance that is provided to developing countries, which have a need to develop a certain skill or competence.

a. Wind projects: birds, bats, insects, local infrastructure (access), protected areas, noise;
b. Small hydropower: fish migration and spawning, increased sedimentation;
c. Biomass/biofuel: air pollution, loss of soil fertility, changes in vegetation type;
d. Indirect and cumulative impacts that are not covered by national procedures;

- Projects that fall under USELF criteria might not be economically feasible;
- Local investors (small and medium Ukrainian businesses) do not have sufficient funds to invest into renewable energy projects.

Expressed Opinions

- Biogas is not included in the Green Tariff, which is seen as a disadvantage of the current regulatory system; otherwise, the regulations for renewable energy in Ukraine are well developed;
- It is necessary to support national production of equipment for the projects using renewable energy;
- Generation of electricity from renewable sources for on-site consumption has very big potential and it is unfortunate that it is not supported by Green Tariff;
- The current market situation is favourable towards renewable energy projects;
- The SEA process in general is potentially a very useful instrument for Ukraine;
- National grid connection is one of the biggest problems for all energy projects, including renewable energy schemes;
- Ukraine does not have, and will likely not have, deficit in electrical power in the near future, however, there is a deficit in heat availability.
- Renewable energy shall be developed according to Germany's or the United States' policies (the state buys the electricity produced on-site using Green Tariff and sells it back to the population at regular prices); and
- The national OVOS (assessment of impacts on the environment) system provides for adequate level of environmental protection during construction and operation stages of renewable energy projects, but has certain limitations.

In general, scoping consultations revealed that almost all stakeholders expressed their interest in the USELF SER, as well as a willingness to participate in further stakeholder engagement process, and confirmed that they would like to receive project updates and other materials.

2.2 STAKEHOLDER ENGAGEMENT PLAN (SEP)

The primary objectives of the SEP are to map the strategies for engaging various stakeholder groups and the public in the activities of the SER by identifying key SER stakeholders, establishing communication methods, disclosing SER project information and, collecting comments and feedback.

The SEP process (shown in **Attachment C)** will continue through the USELF's life after completion of the SER. Consultations will be required for individual projects financed by USELF, and thus require a SEP of their own. The intention is that this SEP will provide a framework for subsequent project-level consultation.

The final SEP document has been made publically available and contained the following:

- Brief description of applicable regulations and requirements for stakeholder engagement and public consultations.
- Summary of previous and on-going stakeholder engagement and public consultation activities.
- A list of identified USELF SER stakeholders and description of communication methods with them.
- Stakeholder engagement program and disclosure of information.
- Descriptions of roles and responsibilities for handling the SER consultation and information disclosure process.
- Grievance mechanism by which feedback, comments, concerns and complaints may be communicated to SER developers and how these grievances and comments will be handled.

2.3 DRAFT SER ENVIRONMENTAL REPORT CONSULTATIONS

2.3.1 Summary of regional consultations

As noted earlier, the formal 120 days Draft SER Environmental Report consultations started in January 2012 and ended on May, 17, 2012.

For this stage of consultations, the following information was made available to the stakeholders and general public:

- USELF SER Draft Environmental Report (English and Ukrainian versions) published on the USELF SER website at www.uself-ser.com, or per individual request on a CD.
- USELF Stakeholder Engagement Plan (SEP), which was also publically available through the USELF SER website or by a request on a CD. SEP was available in English and Ukrainian.
- An updated USELF SER leaflet, describing the SER process and its main outcomes (**Attachment D**).

A range of communication methods were employed during the USELF Draft SER report consultations. In summary, the methods of communication included:

- Publication of the USELF SER Draft Environmental Report and USELF SEP in Ukrainian and English versions at the USELF SER website: www.uself-ser.com
- CD copies of USELF SER Draft Environmental report and USELF SEP available on request
- Maintaining a hotline for stakeholders
- Holding regional stakeholder meetings
- Official correspondence with authorities
- Email and phone communication.

The first USELF SER disclosure took place at the 5th USELF Training Workshop (solar energy training) **in Kyiv** on February 9th, 2012 (for details please refer to www.uself.com.ua). The following regional meetings were undertaken during the March, 2012.

The main objectives of the country wide regional consultations were to disclose the information about the USELF SER and to promote the USELF Program and the SER project among different regional stakeholder groups and public. Initially, it was decided

to undertake consultations in four main regions of Ukraine: Central part (Kyiv), Eastern part (Donetsk and Zaporozhia), Southern part (Simferopol) and Western part (Lviv).

The cities for regional stakeholder meetings were chosen based on the following criteria:

- The potential for renewable energy development in the region.
- Existing initiatives considered and/or supported by the USELF.
- Initial meetings with stakeholders held as part of the USELF SER scoping process
- The overall level of interest demonstrated by local authorities and other stakeholders

The following considerations governed the selection of target audience:

- Ensure the involvement of those stakeholders that attended previous consultation meetings and showed interest in the USELF SER process
- Engage the representatives of local authorities that may be interested in using the SEA tools and supporting renewable energy projects
- Potential interest demonstrated by the members of business community (potential future clients), consultancies and research organisations
- Interest demonstrated by non-governmental organizations toward the SER Report and renewable energy development processes in Ukraine

Based on the above mentioned criteria, the initial plan to hold consultation meetings in Simpheropol, Lviv, Donetsk and Kyiv was slightly modified to include Zaporizhia where the stakeholder meeting was organized with the support of the Zaporizhia City Chamber of Commerce within the framework of the Zaporizhia International Investment Forum, 11th Specialized Agrarian Technology Exhibition "AGROTEKHSERVICE" and 1st Interregional Exhibition "Biofuel and Innovation Technologies". Also, an additional roundtable meeting with NGOs in Lviv was included into the consultation meetings work plan in response to growing concerns over the development of small hydropower plants in the Carpathian Region. **Table 1** below shows the timetable for the USELF SER Report public disclosure and consultation meetings:

Table 1: Timetable for the USELF SER Report Public Disclosure and Consultation Meetings

City	Activities	Address	Dates	Time
Zaporizhia	USELF SER stakeholder meeting	Exhibition Center "Kozak-Plaza", Pobedy Str., 2 floor, Small Hall	14.03.12	(registration at 11:30) 12:00-16:00
Donetsk	USELF SER stakeholder meeting	Shakhtar Plaza, GermanaTitova Ave., 15	15.03.12	(registration at 9:30) 10:00-14:00
Simferopol	USELF SER stakeholder meeting	Hotel "Zvezdnaya", conference hall, M.ZalkiStr, 17-b	16.03.12	(registration at 9:30) 10:00-14:00
Kyiv	USELF SER stakeholder meeting	Hotel "Tourist", conference hall, 2 R. Okipnoi St.,	19.03.12	(registration at 9:30) 10:00-14:00
L'viv	USELF SER NGO meeting	Hotel "Euroset'", conference hall, Tershakovtsev street,	20.03.12	(registration at 9:30) 10:00-14:00

City	Activities	Address	Dates	Time
	Mini-hydro power issue: main public concerns Meeting with NGOs	6A.	20.03.12	15.00-17.00

The stakeholder meetings were attended by the representatives of local authorities (Oblast Administrations and City Councils), scientific institutions, businesses (including renewable energy equipment manufacturers, tourist agencies, consultancies and developers), interested inventors, enterprises cooperating with EBRD and potential clients of the USELF.

The levels of stakeholder activity varied from city to city depending upon the following factors:

- Specifics of regional economic development pattern
- Existing renewable energy uses and practices
- Current environmental issues and their urgency
- Level of activity among local NGOs.

It appears that the development of renewable energy is supported by both local and regional authorities in the Southern (Black Sea) and Eastern Regions, and they are likely to be interested in undertaking the Strategic Environmental Assessment for their regional and local development programmes.

In the Central Region (City of Kyiv), stronger focus is placed upon the development and implementation of the SEA procedures rather than on renewable energy. In the Western Region, renewable energy initiatives are generated by businesses who actively involve consultancy companies in the review of their projects. On the other hand, non-governmental organizations have been traditionally strong in this region, working closely with local communities and initiating additional independent surveys.

The Strategic Environmental report has attracted considerable interest from stakeholders. The following key remarks/recommendations associated with the USELF SER Environmental report have been made by the stakeholders:

- To provide more information about SEA practice and experience in the UK/EU;
- To amend the SER Report to include a glossary of terms
- To provide estimates on the solar energy potential (for Eastern and Central parts)
- To provide information on the compatibility of instruments employed to carry out SEA in Ukraine and other countries
- To identify potential funding sources for such SEA studies.

2.3.2 Key issues, concerns and expectations expressed by stakeholders during regional meetings

Table 2 summarises key issues, concerns and expectations of stakeholders. The table describes their positions towards the renewable energy development in Ukraine, the SER Report and future perspectives. The Minutes of each regional meeting are shown in **Attachment E**.

Table 2: Key comments, concerns and issues raised during the regional meetings

Stakeholder	Key Concerns, Threats and Issues
City of Lviv (Western Ukraine)	
Non-governmental organisations	Suggestions: • Priority should be given to landfill gas recovery programmes/projects • Include the NGO representatives into the USELF expert team Concerns: • Whether and how the SER Report will be used in practice and funding risks involved in any project • The fact that the USELF Programme uses the Green Tariff as an eligibility criterion is considered to narrow its scope of application and hampers opportunities for other types of renewable energy that are more appropriate for a region Threats: • Conflict between the Programme and environment/green tourism • Loss of flora and fauna species, including those listed in the Red Data Book • Lack of transparency in the land permitting process
Local authorities (including District Administrations)	Questions: • SEA experience in the UK Concerns: • Non-transparent public hearing procedures, insufficient information provided to the public or need for further explanations/clarifications • The fact that the Bank supervises its projects only during implementation and seems to be less interested in monitoring their impacts at the operational phase Threats: • Park areas or other valuable natural sites may be used for renewable energy projects supported by the Government or the Bank
Consultancies, universities, experts	Concerns: • Whether fish protection systems are incorporated in the small hydropower plant design • Unsustainable energy use, including electricity use for heating in the situations where solar collectors can be used Threats: • Lack of regulatory framework to guide the planning and siting of small hydropower projects (such framework exists for wind projects) • The need to allocate additional fertile land for transmission lines • The fact that small hydropower projects can be used as an excuse to acquire a site without a competitive tendering process (using a streamlined land permitting procedure stipulated by the Ukrainian legislation) and then change the designated use of the site

Stakeholder	Key Concerns, Threats and Issues
Businesses (including those specialized in tourism)	Concerns: • A relatively minor significance of social and environmental considerations in the feasibility assessment of projects • The biased nature of public hearing process to capture only positive responses • The fact that hydropower dams are often more preferred by developers as compared to the hydropower plants of derivation type Threats: • Reduced landscape amenity value • Tourism will not be possible in the areas converted to renewable energy generation • Fish passages may remain dry for long periods of time
City of Donetsk (Eastern Ukraine)	
Non-governmental organisations	Concerns: • Existing national strategic planning tools are not compatible with those used worldwide Threats: • Insufficiently transparent and efficient stakeholder engagement process
Local authorities (including District Administrations)	Suggestions: • Apply the SEA procedure at the municipality level Concerns: • The lack of coherent and systemic approach toward the formulation and implementation of development strategies/programmes that are sometimes mutually contradictory or compete for resources Threats: • The bias toward the development of renewable energy sources, often to the detriment of other more urgent issues existing in a region, including the construction of desulphurizing facilities
Consultancies, universities, experts	Concerns: • Lack of funding sources for SEA Threats: • Insufficient consideration given to environmental issues in the development programmes at the municipal and regional level
Businesses	Suggestions: • Priority should be given to those renewable energy projects that are more appropriate for the region, i.e. the recovery and use of coal mine methane • Assess the economic feasibility of using renewable energy sources for heating Threats: • Sole focus of investors on economic gains
City of Simferopol (Crimea, Southern Ukraine)	
Non-governmental organisations	Suggestions: • Illustrate the efficiency of using SEA tools at the national level Concerns: • Local catchment areas may not be suitable for wind projects

Stakeholder	Key Concerns, Threats and Issues
Local authorities (including District Administrations)	Suggestions: • Provide the list of connection limitations • Hold consultations t discuss how the European renewable energy practice can be adapted to local specific conditions Questions: • Whether proposed renewable energy scenarios are mutually exclusive • Efficiency of SEA at the national level Concerns: • There is no electricity deficit in Crimea, and the development of heating and hot water supply systems would be more appropriate • Interconnection is an issue
Consultancies, universities, experts	Concerns: • SEA findings need to be revised on a regular basis; the timeframe for this procedure is uncertain • The methodology for revising SEA is lacking
Businesses	Concerns: • High level of bureaucracy • SEA practice is lacking
City of Zaporozhia (Eastern Ukraine)	
Non-governmental organisations	Concerns: • The monitoring of nutrient levels in soil is required Threats: • Unsustainable land management practices may cause desertification
Local authorities (including District Administrations)	Suggestions: • Develop biogas projects • Use wastewater treatment sludge for energy generation Concerns: • The fact that the Dniepro Basin is used inefficiently for small hydropower development needs to be reflected in the SER Report • Lack of SEA experience on the ground • Land permitting issues faced by wind projects Threats: • Lack of an umbrella environmental planning programme
Consultancies, universities, experts	Suggestions: • Apply SEA at the municipality/district level Threats: • The need for conducting the geological and economic assessment of small hydropower and wind projects is ignored

Stakeholder	Key Concerns, Threats and Issues
Businesses	Suggestions: • Hold a training workshop on using biomass for energy generation Concerns: • Use of outdated technologies • Bureaucratic barriers may impede the implementation of renewable energy projects • Cost recovery may be an issue if a project is not profitable • Interconnection issues Threats: • Biogas production results in the generation of ammonium acid
City of Kyiv (Central Ukraine)	
Non-governmental organisations	Suggestions: • A temporary moratorium on small hydropower projects should be introduced Concerns: • All cumulative impacts needs to be considered • SEA and project selection processes for the USELF Programme should be carried out in parallel • Adequate publicity should be ensured for the Programme and related information • The SER Report is long overdue; it would have been more appropriate a year ago Concerns: • Fish passage systems are not included in the small HPP design • It is not possible to consider planned protected areas in SEA • Legal framework for SEA procedures is lacking • Significant land requirement for solar projects, including extensive areas of fertile land
Consultancies, universities, experts	Suggestions: • Provide a glossary of terms in the SER Report • Provide estimates of solar development potential Concerns: • Incompatibility of wind potential estimates/techniques used by local consultancies and SER team • A clear plan of mandatory procedures is lacking in the SER Report • It is impossible to use the Bank's SER initiative as a basis for providing recommendations to the Government • Legal framework for SEA process is lacking Threats: • Transboundary effects of renewable energy projects implemented in the cross-border areas • SEA is not carried out for other renewable energy projects

2.3.3 Small-hydro issue in Carpathians, Western Ukraine

Table 3 below summarises key stakeholder's standpoints regarding small hydropower development in Carpathian region of Ukraine. The information was collected during public consultations held from 14 to 21 March, 2012, and through review of publicly available materials, associated with small-hydro development in Carpathians.

Table 3: Key stakeholders comments and feedback associated with SHPP issue in Carpathians, Ukraine

Stakeholder	Key Arguments, Concerns and Requirements
Non-governmental organizations and activists	Concerns: – Deterioration of water quality; degradation of landscapes and biodiversity; and ultimate loss of river ecosystems – Local communities will not benefit from small hydropower projects and their income opportunities (including those related to tourism) will diminish. – It is claimed that there are plans to construct up to 500 small hydro power plants in the Carpathian Region – Small hydro power plants may have transboundary effects. Requirements: – Suspending or banning the construction of small hydro power plants in the Carpathians – Some NGOs express their willingness to consider environmental criteria for small hydropower projects in the Carpathians.
Tourist companies and tour operators	Changes in flow regime will impede aquatic tourism, and amenity value of local landscapes will be reduced.
Local communities	No consultations over regional small hydro developments were held. It is assumed that local residents may express concerns over the deterioration of ecological status, alteration of traditional landscapes, poor quality of roads and lack of employment opportunities (including tourism-related income opportunities that may be lost/affected)
Local authorities	No special comprehensive survey was carried out to examine views and opinions of local authorities who appear to be interested in small hydropower as an option for improving the reliability of electricity supply to a township or village.
Regional authorities	Lviv Oblast: Plans to develop small hydro power plants are supported. Ivano-Frankivsk Oblast: A moratorium on small hydropower projects has been declared. Zakarpatiia Oblast: The Zakarpatiia Oblast Socio-Economic Development Programme includes a provision for the construction of small hydro power plants and about 300 potential sites (i.e. those that can be potentially used for the construction) have been identified. Chernivtsi Oblast: At this stage, the issue of small hydropower is not so sensitive as in the neighbouring Carpathian Oblasts. The Oblast has adopted the 2011-2015 Chernivtsi Oblast Integrated Energy Efficiency, Energy Saving and Sustainable Fuel Resource Management Programme anticipating the rehabilitation of existing non-operational small hydropower schemes and construction of

Stakeholder	Key Arguments, Concerns and Requirements
	new hydropower plants in the most appropriate locations. The Oblast's estimated hydropower development potential is about 210.7 MW, which is mostly concentrated in the Cheremosh, Prut and Syret River Basins. Whilst none of small hydropower projects have reached the construction phase yet, preliminary surveys are ongoing at some potential sites. Many local environmental activists have expressed their concern over the construction of small hydropower plants.
National authorities	The development of small hydropower is considered as a way to reduce dependence from the centralised electricity supply that relies on large regional power plants (typically thermal power plants using coal, black oil or gas; it is also thought that small hydropower will help improve the reliability of electricity supply in the remote areas and that renewable energy can be developed at the industry/municipal utility level to meet the demand of individual enterprises and – first and foremost – households. The answer to the question whether there are real intentions to construct a large number of small hydro power plants in the Carpathians is no because there are no objective factors that could boost small hydropower in this region (these include local terrain, potential customers, potential generation capacity, and current recreational uses of local watercourses).

In regard to the small-hydro issue in Carpathians, it is important to note the following points:

- There is a serious opposition to the construction of small hydro power plants from non-governmental organizations and local activists, while local and regional authorities are more reserved in their assessment and do not categorically oppose to small hydropower.
- There is no reliable information concerning the real plans regarding the construction of small hydro power plants in the Western Oblasts; this creates conducive environment for speculations on both sides, i.e. among the supporters and opponents of small hydro power plants
- No detailed assessment has been made of potential environmental and social consequences of small hydropower projects in the Carpathian Region; there is a lack of understanding regarding the feasibility and potential costs involved in the cooperation and operation of small hydro power plants.
- There is no mutually agreed assessment of perspectives, opportunities and specifics for tourism development in Lviv, Ivano-Frankivsk, Chernivtsi and Zakarpatiia Oblasts (only general provisions are included in the regional socio-economic development programmes), and the assessment of potential social and environmental consequences of tourism development is similarly lacking.
- There is no reliable information on social consequences of small hydropower projects.
- It should be noted that the scale of small hydropower development may have been exaggerated in many cases. For example, 300 small hydropower projects allegedly planned to be implemented in Zakarpatiia most likely mean the number of sites that may be potentially suitable for development. Local residents are very concerned that these projects may trigger the redistribution

of land ownership in the most fertile floodplain areas along the Tisza, Latoritsa and Uzh Rivers that are of high social significance and commercial value.

- See **Attachment F,** "SHPP Carpathian Screening Tool". In response to a request to provide examples and patterns of best practices in SHPP development relevant and applicable to the Carpathian Region, a screening tool in the form of a table was prepared. The table provides a structured approach to specific information required and goals to be achieved for a variety of SHPP environmental issues.

2.3.4 Conclusions and lessons learned

The following conclusions can be made based on the results of the public consultation process:

- Local authorities are generally inclined to support and encourage renewable energy development in their regions by, inter alia, providing administrative support for renewable energy projects;
- Non-governmental organizations are predominantly critical concerning renewable energy projects, and this situation is caused by largely exaggerated plans for small hydropower in the Western Region;
- All stakeholders have demonstrated interest toward the SEA methodology and willingness to apply SEA procedures in practice.
- Businesses and consultancies have been very active in trying to introduce renewable energy into their business practices.

The following main barriers may impede the implementation of the USELF Programme:

- Active opposition to small hydropower development in the Western Region that may expand beyond the region. Therefore the proper planning and implementation of public consultation exercises for individual site-specific projects is particularly important.
- Focus on other uses of renewable energy that do not qualify for the Green Tariff (e.g. landfill gas, hot water supply systems).
- Land permitting issues.

Expectations/recommendations regarding further activities under the Programme:

- Hold additional training workshops
- Provide methodological support in undertaking the Strategic Environmental Assessment of regional and local development programmes;
- Hold meetings with relevant Ukrainian authorities to present the SER Report and results of public consultations, especially those that relate to the situation with small hydropower and demonstrate the need to lobby the adoption of the Law of Ukraine on SEA.

3. RESPONSES TO COMMENTS FROM STAKEHOLDERS

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
Comments from the Institute of Geography (IoG), Ukraine. Prepared by the following group (all affiliated to IoG): L.G. Rudenko, Dr. (Geography), Professor, I.A. Chervanyov, Dr. (Geography), Professor, S.A. Lisovsky, Dr. (Geography), M. Scherbyna, Researcher				
1.	Section 6, subsection 6.1.1	"It should be noted that the list of legislative documents referred to in the SER Report does not include reference to the Main Concept (Strategy) of the State Environmental Policy of Ukraine till 2020, approved by the Law of Ukraine of 21.12.2010 No. 2818-VI (hereinafter referred to as 'the Strategy') and the 2011-2015 National Environmental Action Plan, approved by the Resolution of the Cabinet of Ministers of Ukraine of 25.05.2011 No. 577-p (hereinafter referred to as 'the National Plan'). These documents place considerable focus on alternative energy development."	Agree with comment. The main principles of the state environmental policy of Ukraine to the year 2020 identify the root causes of environmental problems in Ukraine and define strategic goals of national environmental policy. Implementation of the goal N 6 in the policy would require an increase of renewable and alternative energy sources by 25% from base level to the year 2015, and by 55% to the year of 2010.	Change made in Final SER (page 6-2)
2.	Section 6, subsection 6.1 Section 4, subsection 4.1 and 4.2	"The Strategy [discussed above] includes a provision regarding the technological overhaul of production processes through the development and use of renewable and alternative energy sources, increased use of low-carbon energy, and increase in the use of renewable and alternative energy sources by 25% before 2015 and by 55% before 2020 relative to the baseline level. The renewable energy scenarios identified in the draft SER Report take no account of these provisions."	EBRD shares the goal of increased development and use of renewable and alternative energy sources, and increased use of low-carbon energy. The SER Environmental Report, Chapter 4, Assessment Scenarios, contains preliminary renewable energy estimates of resource potential. The comment is correct that these	Change made in Final SER (page 6-2)

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
			are not intentionally reflective of policy targets. Key provisions of the Strategy will be addressed in the text. The State target economic program on energy efficiency and development of production of energy from renewable sources and alternative fuel for the years 2010-205 adopted by the Cabinet of Ministers of Ukraine, Decree N 243 (2010), sets a goal to decrease the energy consumption per GDP unit by 20% compared to the 2008 level during the Program duration. This would represent a 3.3% annual decrease. The program also stipulates that the share of energy sources developed from renewable sources and alternative fuel will in 2015 constitute not less than 10% of total state energy balance. The program outlines ways and measures of attaining the goal and includes list of actions and tasks.	
3.	Section 6, subsection 6.1 Section 4, subsection 4.1 and 4.2	"The National [Environmental Action] Plan requires the executive authorities to propose incentives that can be used for encouraging economic entities to develop and implement bioenergy, small hydro, solar, geothermal, wind and other energy projects; and draft a law on tax concessions to those economic entities that use alternative and renewable energy sources. The SER's renewable energy	The SER refers to financial and tax incentives that are either in place or that have been proposed. The National Environmental Action Plan for	Change made in Final SER (page 6-2)

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
		development scenarios do not take account of these provisions."	the years 2011 – 2015, adopted by the Cabinet of Ministers of Ukraine decree on May 25, 2011, on N 577-p provides measures on environmental protection. In particular, it foresees that the draft law on tax exemptions for economic entities using renewable and alternative energy sources will be developed in 2014.	
4.	Section 6	"The draft SER Report does not provide clear explanations and comments regarding the specifics of current permitting/licensing procedure, including recent changes in the national legislation that have occurred once the Law of Ukraine "On the List of Permitting Documents that Regulate Economic Activities" has entered into force."	The SER used available information on proposed new renewable energy facilities sponsored by government and private industry. It is expected that permitting requirements will be changed over time. The SER Environmental Report was modified to reflect the location of recent changes. SER report does not aim to provide comprehensive guidance on permitting process. This task will be addressed through the Developer Manual that is being developed by the USELF consultants, and will be available on the USELF website. The abovementioned law does not introduce changes directly applicable to the RES-projects.	Change made in Final SER (page 6-3)

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
5.	Section 4 and Section 6	"The draft SER Report also lacks information on whether and how the provisions of the basic sectoral programme, i.e. the 2010-2015 State Targeted Energy Efficiency and Renewable Energy & Alternative Fuel Development Programme (approved by the Governmental Resolution of 01.03.2010 No. 243), have been considered in the SER process. We also think that it is necessary to take into account planned actions involving the construction of wind plants and solar plants, rehabilitation of existing and construction of new small hydropower plants, construction of power plants using biofuel etc., especially considering the fact that that these actions are planned to be financed from the state budget."	The SER used available information on proposed new renewable energy facilities, though the proposed facilities did not distinguish between government and private industry. The information is not intended to be a complete list. When available, locations of known proposed projects have been provided in the Renewable Energy Scenarios: Technical Reports.	Change in Final SER not required
6.	Section 6, subsection 6.1.2	"The statement that the majority of USELF-funded projects will not be subject to obligatory national EIA and environmental review procedures after the entry into force of the Law of Ukraine "On the Regulation of Urban Planning" in January 2011 (Section 6.1.2) is disputable. According to Article 32 of this Law, the Cabinet of Ministers of Ukraine issued the Resolution of 27.04.2011 No. 557 "On the Procedure for Classifying Developments into the Complexity Categories IV and V". Under this procedure, all types of renewable energy projects described in the draft SER Report can be classified into the Complexity Categories IV and V. Moreover, according to the Article 22 of the above mentioned Law, the Cabinet of Ministers of Ukraine adopted the Resolution of 06.06.2011 No. to expand the List of Activities and Facilities Considered to Pose Higher Environmental Danger by including those projects that are classified as the Complexity Category IV and V. These projects are subject to the mandatory State Environmental Review procedure."	The SER Environmental Report states that the majority of the projects to be potentially financed by USELF will not be subject to OVNS (national EIA) since they do not fall under the IV and V categories of the degree of complexity. Features of the projects falling under the above categories are outlined in the report to illustrate the statement.	Change in Final SER not required
7.	Section 6	"Despite the fact that the draft SER Report is dated March 21, 2011, it often uses outdated or inaccurate data in its analytical sections:		Change in Final SER not required
		- The analysis relies on the 1992 edition of the Red Data Book of Ukraine though the 3rd edition of the Book was released in 2009	Where the SER provides data from the Red Data Book of	

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
			Ukraine, it is from the 2009 edition. (See all of the 2009 Red Data Book references, including species distribution maps in Appendix E, the SER Topic Paper). The exception to this is Table 3-9 of Appendix E which uses the available 1992 data to provide information on the distribution of Listed fish species. This historical data is considered valuable for inclusion as it helps to represent the impact of past impoundment and industrialization.	
		- The maps presented in the annex are also dated 2009	The maps are correctly referenced to 2009 data.	
		- The greenhouse gas emission estimates and development scenarios are based on the pre-crisis (2006) data.	The available data used to prepare the SER included identified data gaps and incomplete records defining air quality and trends. There will continue to be reports on GHG emissions from the electric power sector, but these are expected to confirm that the energy sector is the primary contributor to the GHG emissions in Ukraine.	
		- Conclusions regarding drinking water quality are based on the 2002 data, being inconsistent with the maps; - Water supply and wastewater discharge information is dated 2009.	In accordance with the UK Practical Guide to the SEA Directive, historical data has been used to help identify	

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
			environmental issues and trends in the areas under the consideration of the SER. Alongside each topic section of the Report there is an explanation of data limitations.	
8.	Section 4, Figure 4-1.	"As regards wind density estimates, the existing meteorological observation system is guided by special instructions that do not provide for the monitoring of parameters used in the tables and maps describing the renewable energy potential. For example, Ukraine has no any observation data and certified calculation techniques to characterize mean wind power density at 80 m (please see Figure 4.1 and explanations to it)."	To represent wind resources across Ukraine on a consistent basis, the SER used commercially available wind data from one source. As indicated in the SER, Figure 4-1, the source is 3Tier, a highly regarded energy data vendor. The maps provided by 3Tier included modeled wind data at 80m Wind Power Density Map (10 year normalized) and 80m Annual Wind Speed Map (10 year normalized), both at 2-5 km resolution.	Change in Final SER not required
9.	Section 4; Figures 4-2 and 4-9	"The National Atlas of Ukraine containing virtually all available factual material regarding the nature, resources, population and state of environment in the whole of Ukraine includes maps whose titles appear to be similar to those of some of the maps presented in Section 4 (Maps 4-2 - 4-9). The comparison of these maps leads us to the conclusion that they differ from each other. It is hardly likely that the authors could have access to any other information than that used in the Atlas (i.e. the data held by the State Committee of Statistics)."	Agree with comment that virtually all available environmental data is contained within the National Atlas of Ukraine. This has been cited underneath the figures that use that source. For the purposes of the SER, the figures use other data sources and overlay information in order to achieve the focus of this study. All those data sources are	Change in Final SER not required

<table>
<tr><th>Comment number</th><th>Relevant section, USELF Draft SER Environmental Report</th><th>Comment</th><th>Response</th><th>Change in Final SER (page no.)</th></tr>
<tr><td></td><td></td><td></td><td>identified as well.</td><td></td></tr>
<tr><td>10.</td><td>Section 4</td><td>“Our experts have reviewed the tables characterizing the renewable energy resource potential and regional scenarios (for 8 regional electric energy systems and each of Oblasts) and elaborated them further because the Report does not contain some detailed calculations behind the country’s total potential (36158 MW) and percentage of utilizable potential (for 8 energy systems). The results of our calculations are highlighted in bold.

Table 1 (based on Table 4-2 of the SER Report), MW

<table>
<tr><th>No.</th><th>Regional Electric Power Systems</th><th>Development Potential</th><th>Regional Wind Only Scenario</th><th>Percentage of Utilisable Potential</th></tr>
<tr><td>1</td><td>Central</td><td>1229</td><td>1229</td><td>100</td></tr>
<tr><td>2</td><td>Crimea</td><td>2839</td><td>2839</td><td>100</td></tr>
<tr><td>3</td><td>Dnipro</td><td>2979</td><td>2979</td><td>100</td></tr>
<tr><td>4</td><td>Donbas</td><td>3813</td><td>3526</td><td>92</td></tr>
<tr><td>5</td><td>Northern</td><td>229</td><td>229</td><td>100</td></tr>
<tr><td>6</td><td>Southern</td><td>2875</td><td>1284</td><td>45</td></tr>
<tr><td>7</td><td>South Western</td><td>3795</td><td>894</td><td>24</td></tr>
<tr><td>8</td><td>Western</td><td>18399</td><td>1408</td><td>8</td></tr>
<tr><td></td><td>TOTAL</td><td>36158</td><td>14386</td><td>40</td></tr>
</table>

The following conclusions can be made from the comparative analysis of tables included in the draft SER Report and our estimates:

a) Data showing that the difference in the levels of wind potential among the regions can be in the order of 80 times is not clear.
b) According to Table 4-2, some Oblasts have no wind potential at all (Kharkiv, Sumy, Volyn, Vinnytsia), while their neighbouring Oblasts show quite reasonable levels of wind potential, e.g. Rivne Oblast that shares borders with Volyn Oblast and has the same environmental conditions (2438 MW); Ternopil Oblast lying close to Volyn Oblast (just across the narrow strip belonging to Khmelnitsk Oblast) (as high as 3149 MW); Donetsk Oblast</td><td>Table 4-2 in the SER report is for on-shore wind development potential only. The Development Potential column shows wind potential based on wind “technical exclusions” described in Table 4-1 with more detailed exclusions described in the Renewable Energy Scenarios: Wind Technical Report. Areas with low power density are excluded and additional discounts were applied to land areas with good resources because not all land areas can be reasonably developed. The Regional Wind Only Scenarios column further applies the transmission and regional load constraints described in the Renewable Energy Scenarios: Wind and Transmission Technical Reports. Some regions are less constrained by these issues than others.</td><td>Change in Final SER not required</td></tr>
</table>

<table>
<tr><th>Comment number</th><th>Relevant section, USELF Draft SER Environmental Report</th><th>Comment</th><th>Response</th><th>Change in Final SER (page no.)</th></tr>
<tr><td></td><td></td><td>(over 2000 MW) that adjoins Kharkiv Oblast with its ‘null’ potential, etc. The comparison with the maps included in the National Atlas shows that there is no linkage between the tables and maps in the SER Report. Historical meteorological time series were carefully considered during the development of the National Atlas and maps contained therein are reliable. Given the above, wind potential estimates presented in Table 4-2 are considered as disputable.
c) In those regions that have an objectively high wind potential, including the Western region that accounts for 50% of country’s total potential (which also looks suspiciously high), the utilizable potential is estimated at only 8%. The justification of these estimates is very biased and uses different criteria for each region, being very superficial and unconvincing.”</td><td></td><td></td></tr>
<tr><td>11.</td><td>Section 4</td><td>“As regards the solar energy development scenario, Table 4-3 does not include any development potential estimates and describes two scenarios: solar power only and solar power in combination with wind.

Solar Power Development Scenarios (Solar Only and Wind & Solar), MW

<table>
<tr><th>No.</th><th>Regional Electric Power Systems</th><th>Solar Only Development Scenario</th><th>Wind and Solar Development Scenario</th></tr>
<tr><td>1</td><td>Central</td><td>1800</td><td>571</td></tr>
<tr><td>2</td><td>Crimea</td><td>2839</td><td>710</td></tr>
<tr><td>3</td><td>Dnipro</td><td>3980</td><td>1001</td></tr>
<tr><td>4</td><td>Donbas</td><td>0</td><td>0</td></tr>
<tr><td>5</td><td>Northern</td><td>0</td><td>0</td></tr>
<tr><td>6</td><td>Southern</td><td>1281</td><td>320</td></tr>
<tr><td>7</td><td>South Western</td><td>0</td><td>0</td></tr>
<tr><td>8</td><td>Western</td><td>0</td><td>0</td></tr>
<tr><td></td><td>TOTAL</td><td>9900</td><td>2602</td></tr>
</table>

The table shows that the combination of two quite powerful renewable energy sources yields a three times worse result than the solar only development scenario. The explanation provided in the text of the Report is based on the</td><td>The assumption that the combination of wind and solar would compete somewhat for transmission is a conservative assumption used for constraining the renewable energy developments scenarios for SER purposes. The Wind and Solar Development Scenario column shows the development of solar, while Table 4-2 shows the corresponding wind development under that scenario. Regions showing no solar development are areas with less optimal solar resources and face hilly or mountainous terrain, which may be less economic to develop given the Green Tariff for solar. The scenarios also</td><td>Change in Final SER not required</td></tr>
</table>

Comment number	Relevant section, USELF Draft SER Environmental Report	Comment	Response	Change in Final SER (page no.)
		assumption that these two sources will compete for access to transmission networks etc. The mere existence of this constraint looks doubtful. According to our data, the Donbas, Northern and Western Systems are strong and extensive, any competition is therefore unlikely. Furthermore, fundamental and experimental research results available both in Europe and Ukraine (for example, the scientific thesis by S. Velichko on hybrid solar/wind power systems defended in Kharkiv in 2006) show obvious synergism between these two sources with their different seasonal patterns of resource availability.	focus on utility-scale solar that meet Green Tariff requirements and would require environmental review. Additional on-site or smaller solar installations that may be able to be developed in all regions are not included in these scenarios because these types of installations do not require extensive environmental review.	

12.	Section 4	"In our analysis, we have tried to understand the criteria employed to evaluate the renewable energy development potential in each Oblast and our conclusion is that there are none of them! Professor I.H. Chervanyov, who has been studying the resource potential of territories for the larger part of his academic career, has noted with surprise that the authors of the Report are very flexible in changing the classification and evaluation criteria in a way that supports certain subjective vision and conclusions: In one case, this concerns the description of terrain that uses absolutely arbitrary characteristics (for example, one of flat areas in the Eastern Ukraine is characterized as mountainous); In another case, this concerns the competition (!) between solar and wind power – it is asserted that wind power will compete with solar power and vice versa. The insufficient capacity of transmission grid is considered by us as a weak argument. The pressure on existing infrastructure can be adjusted by reducing the use of fossil fuel, and this will be a net benefit to the environment. It is striking that this recommendation is not included in the SER Report which focuses on the environmental review."	The criteria used for evaluation of renewable energy potential are discussed in the SER, Chapter 4, Assessment Scenarios as well as the Renewable Energy Scenarios: Wind and Transmission Technical Reports. The comment does not cite or locate the mischaracterization of terrain in eastern Ukraine. We apologize if there is any error. The assumption that the combination of wind and solar would somewhat compete for transmission is a conservative assumption used for constraining the renewable energy development scenarios for SER purposes.	Change in Final SER not required
13.	N/A	"The described examples of unjustified statements and conclusions create an impression that for some reason the authors tend to encourage the channelling of investment funds to regions with lower renewable energy resource. This may discredit the mere idea behind the alternative energy whilst supporting traditional energy generation; and another thing is that areas with better and richer resources will be used to the benefit of somebody else."	EBRD has established the Ukraine Sustainable Energy Lending Facility to encourage investors to consider and undertake renewable energy projects. The renewable energy development scenarios are for SER program purposes only and do not determine where USELF will fund projects.	Change in Final SER not required
14.	N/A	**Comments on terminology:** The terminology used in the draft SER Report considerably differs from legislated and commonly used terms and definitions, and this may lead to difficulties in understanding and ambiguous interpretation. The examples of difficult-to-understand and not legislated terms and phrases include, inter alia: "minimize adverse effect upon fisheries", "risk of potential mobilisation of	Agree with comment regarding a glossary. The Final SER includes a glossary to ensure terminology clarification and avoid ambiguity. The SER	New Glossary added as Section 11 of SER. Includes 55 terms, half related to

		anthropogenic contaminants", "high value soil", "nationally designated nature conservation sites", "adverse effect upon important habitats", "certain executive authorities" etc. The text of the Report contains a considerable number of non-understandable and non-scientific phrases that make future use of this document virtually impossible. For example, the following phrases are difficult to understand: "high levels of soil contamination (including heavy metals) may impede the development of all renewable energy scenarios"; "avoiding adverse impact on soils" in the context of onshore wind plants; "high value soil" which narrows the notion of "high value land"; "SER objectives for landscapes and biodiversity" that are only considered in the context of landscape conservation; "loss of arable land during the construction of wind plants" etc. We suggest that the text of the Report should be brought in consistency with the commonly used scientific terminology and legislated terms, and a glossary of terms be provided in the beginning of the document.	report uses terminology and definitions accepted in international expert communications. At the same time, substantial efforts were undertaken to ensure that the report is useful and comprehensible for a Ukrainian-speaking reader. In particular, consultations were carried out with relevant authorities in Ukraine and the professional community. No need to amend the report terminology was identified during these consultations.	environmental topics and half to renewable energy topics.
15.	Section 6.4	"The assumptions and limitations identified in the Report lack a number of key indicators and characteristics that are likely to have significant environmental impact. The Report only focuses on the nationally protected areas where the implementation of renewable energy projects is considered to be unlikely due to the limitations entailed within a land permitting procedure. At the same time, no consideration is given to the potential adverse effects of these projects if these are located near/within the locally protected areas though the likelihood of these effects is considered to be relatively high."	The SER Environmental Report utilises the available World Database on Protected Areas. All protected areas classified according to IUCN categories of protected areas have been included. In addition, to counter inconsistent data coverage of locally protected biodiversity areas, a national habitats dataset (which includes remnant natural ecosystems) has been used. This dataset has been included to identify areas with natural ecosystems which are not protected by international, national or regional designations but which warrant inclusion in assessments (including the spatial constraints analysis).	Change in Final SER not required

			Whilst every effort has been made to identify readily available protected area data, it is not appropriate or feasible to collect data on all locally protected sites at the strategic level of assessment required by the SER. Rather, local-level information such as local biodiversity sites would require gathering during a project-level environmental assessment, such as an EIA.	
16.	Section 4	"The analysis of bio-energy potential in Zakarpattia Oblast gives no consideration to local terrain; the statement that biomass projects are expected to cause minor impact on air quality and climate is disputable; management/recycling options for ash residues that are likely to be generated in significant qualities have not been considered."	The disposal ash residues are identified as a significant issue in Section 3.2.4 of the SER Environmental Report and it is assessed in Appendix C that there is a potential impact upon soil fertility if biomass were to be burned in fields or used for fertilizer as is traditional practice. Section 8.4.4 recommends mitigation in the form of waste management plans which would be drawn up for individual projects in order to provide appropriate management for such residues.	Change in Final SER not required
17.	Section 4	"The analysis and estimates relating to biogas potential take no account of the fact that a considerable proportion of manure (cattle and poultry) is used as a fertilizer."	The SER Environmental Report, Chapter 4, Assessment Scenarios, Section 4.2.6, Biogas, page 4-14, discusses the anaerobic digestion of animal manure. The Biogas Technical Report, page 2-8, discusses the current uses of animal manure, and describes the anaerobic digestion projects	Change in Final SER not required

			that would produce combustible gas with liquid fertilizer as a residual by-product.	
18.	Section 8	"The draft SER Report gives little or no consideration to noise pollution and its two components (infrasound and ultrasound) and their impact on ecosystems and communities; it does not provide any estimates regarding planned land requirement that can be as high as 30-46 ha/wind plant, nor does it provide any analysis of vibration effects or recommendations on the size of safety zones (a turbine blade may break off and land about 800 m away)."	The SER Environmental Report highlights the potential for noise and vibration impacts as one of the three primary environmental constraints for each renewable energy scenario (see Table 10-1). Mitigation is recommended for all scenarios. Land take is identified as a significant issue for wind farms and their siting outside of sensitive areas is therefore recommended (see for example Table 8-9).	Change in Final SER not required
Comment from Andriy Konechenkov, Chief of Ukrainian Wind Energy Association				
19.	Section 3, subsection 3.3	"In the SER text you mention 80 MW of on-shore wind power capacity. In reality, as of December 31, 2011 the total on-shore wind installed capacity is 151.1 MW. Please correct the number in the text".	We appreciate the information and this data is added to the SER text.	Change to Final SER (page 3-2)
Comments and feedback on USELF SER based on the outcomes of the regional meetings				
20.	N/A	Amend the SER Report to include a glossary of terms	Comment noted. A glossary is provided listing the 50 most common technical terms used (25 relating to SER practice and 25 relating to renewable energy technologies).	New Glossary added as Section 11 of SER. Includes 55 terms, half related to environmental topics and half to renewable energy topics.
21.	Section 4	Provide estimates on the solar energy potential	Since solar energy is ubiquitous--meaning solar projects could be installed virtually anywhere--the total amount of solar energy potential is not a meaningful estimate, unless constrained using parameters such as the ones used	Change in Final SER not required

			in developing the renewable energy scenarios. The SER Environmental Report provides scenarios of potential development of utility-scale, ground-mounted solar energy projects in various regions of Ukraine, using certain assumed constraints on development. These constraints include the quality of the solar resource in an area, the amount of available level land (<5% slope), the competing uses for level land, and the available transmission transfer capacity to move solar energy to markets. Additional on-site or smaller solar installations that may be able to be developed in all regions are not included in these scenarios because these types of installations do not require extensive environmental review.	
22.	Section 2	1. Provide information on the compatibility of instruments employed to carry out SEA in Ukraine and other countries 2. Insufficient consideration given to environmental issues in the development programmes at the municipal and regional level	1. The USELF SER is guided by EU directives regarding SEA's, and other pertinent guidance such as the objectives based approach to SEA in the UK ODPM guidance. Recent SEA case studies from the Crimea also informed the process. 2. The renewable energy development and environmental constraints process represented in the SER is considered at a national scale and is focused on	Change in Final SER not required

			assessing the USELF facility. USELF and EBRD are not public bodies and as such have no involvement or influence over spatial planning at the regional or municipal level. Public bodies would need to carry out SEAs of municipal and regional spatial plans as they arise. It is envisaged however that the content and processes detailed in the USELF SER will be of assistance in guiding such future SEAs. Private developers who seek USELF financing must demonstrate knowledge of and compliance with environmental issues and community concerns that arise in local, municipal, and regional level. Public authorities in Ukraine can take these into account if an SEA becomes a part of Ukraine Law.	
23.	Section 2	1. Provide more information about SEA practice and experience in the UK. 2. Hold consultations to discuss how the European renewable energy practice can be adapted to local specific conditions	1. Comment noted. Information about SEA experience in UK is added to the Final SER. 2. This is not something that the SER can make comment on as it is for the consideration of the public authorities how SEA can be integrated into future renewable energy planning.	Change in Final SER (pages 2-2, 2-3)
24.	Section 2	Identify potential funding sources for SEA studies	The SER cannot comment on this, other than to acknowledge that it was an issue raised.	Change in Final SER not required
25.	Section 4 and Section 8	Fish passage systems are not included in the small hydro design	The SER includes mitigation for	Change in Final

			fish passage facilities and also for fish protection systems (see Section 8.4.5). There are various options for fish passage. The most suitable option would be determined with environmental information gathered during the planning process for an individual project.	SER not required
26.	N/A	1. Apply SEA at the municipality/district level 2. Illustrate the efficiency of using SEA tools at the national level	1. See response to Comment 22, item 2. 2. The USELF programme is being initiated with the SER. The concept is that this strategic, overview-level renewable resource assessment and environmental review will result in better screening of renewable energy projects. The approach is described in the SER initial program leaflet; streamlining the impacts assessment, mitigating environmental impact, and helping developers meet Ukrainian permitting requirements. The result would be to streamline the EIA review and assist in the finance of environmentally responsible projects through USELF.	Change in Final SER not required
27.	Section 4	The fact that the Dniepro Basin is used inefficiently for small hydropower development needs to be reflected in the SER Report.	The SER identifies three river systems in Ukraine with significant hydropower resources. The Dniepro Basin is discussed in "Tributaries of the Dnieper and	Change in Final SER not required

			Central Ukraine". The SER Small Hydropower Technical Report contains a discussion of the large hydropower installations on facilities on the Dneipro River and the Dniester River, and also notes "a major Hydropower Rehabilitation Project, partially funded by the World Bank, which will rehabilitate 46 hydroelectric units and associated plant equipment at nine hydroelectric plants" in these areas. Also noted is that "Literature searches and discussions have identified a few key basins as having hydropower development potential for future development or rehabilitation (less then 10 MW to fit Green Tariff criteria). These areas include: • Dniester River Basin • Tisa River Basin • Tributaries of Dnieper and the Central Ukraine While all of these river basins are potential candidates, only the Carpathian region has available information that provides some details on facilities and locations for consideration in development or rehabilitation.	
28.	N/A	SER findings need to be revised on a regular basis; the timeframe for this procedure is uncertain	The SER is intended only as an initiating document for the USELF programme. Project-specific environmental documents are required by	Change in Final SER not required

			USELF to complete the environmental process for individual projects.	
29.	Section 4	Provide the list of grid connection limitations	The SER contains a discussion of the grid in Ukraine, located in the Transmission report under "Category 3: Renewable Energy Scenarios: Transmission". Grid connection limitations are provided in several parts of the report, with interconnection constraints discussed at the beginning of the report, and estimated transfer capacity by regional transmission system in Table 3.	Change in Final SER not required
30.	Section 4	Are proposed renewable energy scenarios mutually exclusive?	No, however one consideration needs to be explained. Wind and solar renewable energy resources are intermittent and difficult to predict. The SER contains an assessment of the simultaneous generation from wind and solar resources, and the transmission capacity limits that would limit the market availability of the combined resources if extensively developed. In that sense, wind and solar are competing for the same limited transmission capacity and are mutually exclusive, but only intermittently.	Change in Final SER not required
31.	Section 5, Section 6 and Section 8	***Small-hydro power development issue in Carpathians. Key issues and concerns:***		A Small Hydro-Power Plant (SHPP) Screening Tool has been developed, and is included in the Summary of Public
		- Local communities will not benefit from small hydropower projects and their income opportunities (including those related to tourism) will diminish. Changes in flow regime will impede aquatic tourism, and amenity value of local landscapes will be reduced.	Agree with comments. The potential impacts to tourism, habitat, biodiversity, and water quality are discussed in several parts of the SER documents. For	
		- Deterioration of water quality; degradation of landscapes and		

		biodiversity; and ultimate loss of river ecosystems	a summary, please see Table 10-1, of the SER Environmental Report. Also see Appendix C of the Environmental Report, "Assessment of Likely Significant Effects", for the tables that address the impacts from small hydropower plants.	Consultation as Appendix F. Also with the Screening Tool is a process flow chart for SHPP Carpathian reviews with the participation of stakeholders.
		- It is claimed that there are plans to construct up to 500 mini HPPs in the Carpathian Region.	USELF and EBRD have no influence over this process and if it is part of a regional plan, then it is recommended that the plan itself is subject to SEA.	
		- Small hydro power plants may cause transboundary effects.	Section 8.2.6 and 8.4.6 contain specific reference to the potential for trans-boundary effects as a result of small hydropower plants. Furthermore, where any effects have the potential to be trans-boundary this is highlighted in the significance effects tables in Appendix C.	
		- No consultations with local Carpathian residents potentially affected by the small hydro development were held. It is assumed that local residents may express concerns over the deterioration of ecological status, alteration of traditional landscapes, poor quality of roads and lack of employment opportunities (including tourism-related income opportunities that may be lost/affected)	USELF has undertaken an extensive stakeholder engagement programme as part of the SER, as guided by our Stakeholder Engagement Plan (SEP). This has included consultations with key stakeholders; publication of project documents in Ukrainian for the public; regional meetings and workshops across the country (including a meeting in Lviv, near to the Carpathians), which were advertised in regional newspapers. The SEP also details the grievance mechanism in place. Stakeholder engagement	

			is an important part of all EBRD-funded projects and any small hydropower projects undertaken with USELF funding will be required to satisfy the EBRD Environmental and Social Policy in this regard.	
		- No special comprehensive survey was carried out to examine views and opinions of local authorities who appear to be interested in small hydropower as an option for improving the reliability of electricity supply to a township or village.	Survey and primary data collection is not normally carried out for SEA/ SER. It is for local authorities to determine their owning planning regime and apply SEA/ SER as required. It is not within the remit of USELF to undertake spatial planning.	

LIST OF ATTACHMENTS

Project Development Support

- A related but separate effort of Ukraine Sustainable Energy Lending Facility
- Renewable energy project development support is available through a Project Support Team based in Kiev.
- The Project Support Team screen projects for support by USELF, and works with developers of selected projects on proposals for USELF financing.
- The Bank will be able to provide developers the support they need to prepare projects in Ukraine, while at the same time ensuring the information required for the Bank's due diligence is prepared in a thorough and consistent way for each project.

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Strategic Environmental Review

of Renewable Energy for Ukraine

To help Ukraine realize its renewable energy potential, the European Bank for Reconstruction and Development (EBRD) has launched the Ukraine Sustainable Energy Lending Facility (USELF).

USELF aims to provide development support and debt finance to renewable energy projects which meet required commercial, technical and environmental standards.

Strategic Environmental Review

USELF is conducting a Strategic Environmental Review (SER) to "set the stage" for later environmental reviews of renewable energy projects in Ukraine. The SER will be performed in collaboration with key stakeholders in renewable energy development in Ukraine.

Strategic Environmental Review

In co-operation with the national authorities in Ukraine, the newly formed Ukraine Sustainable Lending Facility has commissioned a Strategic Environmental Review (SER) focusing on renewable energy technologies in selected areas of Ukraine.

The purpose of the SER is to "set the stage" for later environmental reviews of specific renewable energy projects. The SER will comply with EBRD Environmental and Social Policy and the Public Information Policy. The SER will be guided by the European Union Strategic Environmental Assessment Directive.

The SER will be undertaken in collaboration with key stakeholders in the area of renewable energy development in Ukraine, representatives from ministries, regulators, developers, local power utilities, and other stakeholders.

Purpose of the Strategic Environmental Review

The USELF Strategic Environmental Review (SER) represents a key initial step toward effectively and efficiently developing renewable energy projects in Ukraine. The SER evaluates the general impacts of developing renewable energy projects on environmental resources, communities, and the economy and identifies strategies to avoid, minimize, and mitigate those impacts while moving projects forward.

Later steps, after the SER is completed, will utilize the environmental and project information and the methodology in the SER as the basis for developing and permitting future projects. By laying out the path for this step-wise process, the USELF can foster selected renewable energy projects and transmission improvements that will ultimately deliver more and "greener" power to the Ukraine electric grid.

Limitations and Benefits of the SER

The SER will consider possible renewable energy projects, in the locations that they might be proposed. Later when actual projects are proposed, a project-level environmental review will be needed.

However, the necessary project-level environmental reviews can use the permitting path laid out and approved in the SER. For example, small-hydro project developers will know the type of fisheries and water quality information needed for permit applications; wind project developers will know the type of bird and noise information needed for permit applications. They will also know the type of mitigation measures that will likely be required for permits to be approved.

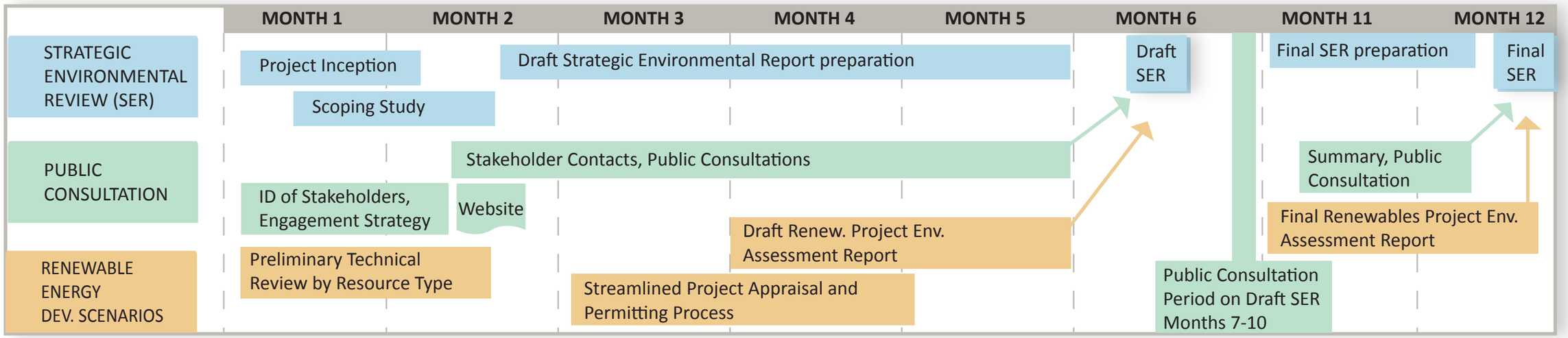
Transmission Grid

Delivering renewable energy to electric power customers is essential. The SER will also assess the possible grid connections at medium and high voltages, identify the possible ways of connecting the new generating facilities to the grid, the technical constraints and the likely costs.

Process for the Strategic Environmental Review

The work needed to prepare the SER is shown below in an ambitious one-year schedule.

- The SER will use primarily existing environmental information as the environmental setting in Ukraine that could be impacted by renewable energy development. The possible impacts to the environment from each type of renewable energy technology will be evaluated and mitigation measures will be proposed.
- Throughout this process, the SER team will conduct public consultation to seek the best existing information possible and input on environmental impacts and mitigation measures.
- As a "stand-in" for the renewable energy projects that are likely in the future, the SER will develop scenarios of solar, wind, biomass, small hydro, and geothermal projects in the locations where these types of resources are known to exist in Ukraine.



Підтримка розвитку проекту

- Зв’язна, але незалежна спроба запуску програми фінансування альтернативної енергетики в Україні.
- Підтримка розробки проекту із відновлюваної енергії за допомогою групи підтримки проекту, що розташована у Києві.
- Група підтримки проекту захищає проекти USELF та працює із розробниками вибраних проектів за пропозиціями фінансування USELF.
- Банк зможе забезпечити підтримку розробників, яка їм необхідна для підготовки проектів в Україні, в той же час надаючи інформацію, що необхідна для виконання юридичної експертизи банку, й спільного руху кожного проекту.

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Strategic Environmental Review of Renewable Energy for Ukraine

Для того, щоб допомогти Україні реалізувати її потенціал відновлюваної енергії, Європейський банк реконструкції та розвитку (EBRD) запустив Програму фінансування альтернативної енергетики в Україні (USELF).

USELF націлена на забезпечення конструкторських робіт та залучення коштів за допомогою позик для проектів із відновлюваною енергії, що відповідають необхідним комерційним, технічним та екологічним стандартам.

Стратегічна оцінка впливу

Метою SER є «налагодження етапів» для наступних аналізів впливу на оточуюче середовище особливих проектів із відновлюваної енергії. SER приймає на себе зобов’язання по співпраці із основними зацікавленими сторонами в області розвитку відновлюваної енергії в Україні.

Стратегічний аналіз впливу на оточуюче середовище

У співпраці із державними органами влади в Україні знову створена Програма раціонального фінансування в Україні запустила стратегічний аналіз впливу на оточуюче середовище (SER), фокусуючи увагу на технологіях відновлюваної енергії у вибраних районах України.

Метою SER є «налагодження етапів» для наступних аналізів впливу на оточуюче середовище особливих проектів із відновлюваної енергії. SER буде відповідати природоохоронній та соціальній політиці EBRD, а також політиці громадської інформації. SER буде наслідувати директиву ЄС про стратегічну оцінку впливу на оточуюче середовище.

SER приймає на себе зобов'язання по співпраці із основними зацікавленими сторонами в області розвитку відновлюваної енергії в Україні, представниками міністерств, регулюючих органів, розробників, місцевих енергосистем та інших зацікавлених сторін.

Мета стратегічного аналізу впливу на оточуюче середовище

Аналіз впливу на оточуюче середовище USELF представляє собою основний вихідний етап щодо проектів із відновлюваної енергії в Україні, які ефективно розвиваються. SER оцінює загальні впливи проектів

із відновлюваної енергії в Україні, які ефективно розвиваються, на ресурси оточуючого середовища, житлові комплекси, а також економіку та визначає стратегії, щоб можна було уникнути, мінімізувати та пом'якшити такі впливи під час просування проектів.

На більш пізніх етапах після завершення SER відбуватиметься використання інформації із захисту оточуючого середовища та проекту, а також методології в SER в якості підстави для розвитку та отримання дозволу на виконання майбутніх проектів. Під час планування шляху для цього покрокового процесу USELF може сприяти розвитку вибраних проектів із відновлюваної енергії та передачі вдосконалень, що в кінці кінців дасть нову потужність електричним мережам України.

Обмеження та переваги SER

SER розгляне можливі проекти із відновлюваної енергії у місцях, де вони можуть бути запропоновані. Пізніше, коли будуть реальні проекти, потрібно буде виконати аналіз рівня впливу проекту на оточуюче середовище. Проте необхідний аналіз рівня впливу проекту оточуюче середовище може використовувати дозвіл шляху, запланованого й затвердженого в SER. Наприклад, розробники невеликого гідропроекту будуть мати інформації з видів рибного господарства та якості води, яка необхідна для подання заявок на отримання дозволів; розробники вітряних проектів будуть мати інформацію з видів птахів та шуму, яка необхідна для подання заявок на отримання дозволів. У них будуть відомості щодо видів заходів по зниженню впливу, які, імовірно, будуть потрібні для схвалення дозволів.

Мережа електропередач

Подача відновлюваної енергії споживачам електроенергії є первинним завданням. SER також виконає оцінку можливих підключень мереж середньої та високої напруги, визначить можливі шляхи підключення нових генеруючи установок для мереж, технічних умов та, імовірно, цін.

Процес стратегічного аналізу впливу на оточуюче середовище

The work needed to prepare the SER is shown below in an ambitious one-year schedule.

- SER буде використовувати первинно існуючу інформацію про оточуюче середовище, таке як екологічне становище в Україні, на яке може бути здійснено вплив у процесі розробки проекту із відновлюваної енергії. Буде виконано оцінку можливого впливу на оточуюче середовище на підставі кожного виду технології відновлюваної енергії, а також буде запропоновано засоби зниження такого впливу.
- Протягом даного процесу група SER проведе громадські слухання, щоб знайти кращу існуючу інформацію по можливостям та введення заходів із зниження впливу на оточуюче середовище.
- У якості «страховки» проектів із відновлюваної енергії, за якими, імовірно, в майбутньому SER розробить сценарії проектів використання сонячної, вітряної енергії, енергії біомаси, невеликих гідро-, а також геотермальних проектів у місцях, де ці види джерел енергії, як відомо, маються в Україні.

ATTACHMENT B - SUMMARY OF STAKEHOLDERS FEEDBACK DURING SCOPING CONSULTATIONS

Summary of Scoping Consultations with Stakeholders (Round 1 of Scoping Consultations)

nn	Institution/ organization	Type	Contact info	Date
1.	Scientific Engineering Centre "Biomass" Ltd. (SECB)	Consultancy	Ukraine, 03067, Kiev, postal box 66 Phone: +38 044 332-9140 Dr Georgiy Geletukha, Director Mobile: +38 050 358 2454, email: geletukha@biomass.kiev.ua	Nov 22
Summary There is a significant flaw in Ukrainian regulations of AES usage, namely that is that biogas is not included into the 'green tariff' concept; this issue is being currently resolved by the legislators. Another problem is that the boiler using the biomass is polluting atmosphere more than the boiler on methane. The boiler on the biomass will not be able to meet national emission standards (recently changed to be in line with the European Union standards). There is no region of Ukraine where the biomass projects are not feasible. North and West of the country could use the wood processing wastes, and the Central and Eastern part – agricultural wastes. Ideally, an ash after burning the biomass to produce energy, should be returned to the field, to maintain fertility. To what extent the biomass production was sustainable, could also be investigated, to ensure that environmentally-friendly technologies are used.				
2.	National Technical University of Ukraine 'Kyiv Polytechnic Institute', Institute of energy saving and energy management	Ministry of Science and Education of Ukraine, university	Ukraine Kyiv, Politekhnichna str., 6, http://tef.kpi.ua/16 Power engineering faculty, Karaeva Natalia , associate professor Mob. 097-627-24-25 Ukraine 03056 Kyiv , Borshagivska str, 103, tel 406-83-08, 454-93-75 http://iee.kpi.ua , Rozen Victor, Head of the Department, professor. e-mail: iee@ntu-kpi.kiev.ua, rosen_wp@mail.ru	Nov 23
Summary AES development is a big scientific topic currently under development by the National technical university. They combine economic research on feasibility of AES development, technologies assessment, and modeling of energy demand and supply. Prognosis of energy system of Ukraine is done by the Institute of Strategic Studies of the Academy of Science of Ukraine; however, on the local (city) level the prognosis are developed by the Technical University. Energy efficiency and energy saving are two big issues that are more significant than the AES usage; however, there are technologies				

available, designed (but mainly not patented yet) by the scientific team of Technical University. Energy saving, energy audits, planning for energy systems development, with the use of AES, could be implemented by using specialized software that is being developed in the Technical University. Implementation of such approach will increase transparency, efficiency of all components of energy demand and supply system. Information on the energy infrastructure could mainly be found in the Ministry of Fuel and Energy, but could also be accessed through the specialized agencies, incl Technical University.

3.	USELF	EBRD Program	01601 Kyiv Ukraine, Shovkovycgna str 42/44, of.B, Business center 'Horizon Office Towers' Tel +380-44-2895632, Oleksiy Romanov, expert on economic issues, email oleksi.romanov@uslf.com.ua	Nov 24

USELF expectations:

- Recommendation on streamlining permitting process on the level of local and regional authorities , identification of the key obstacles, e.g regulatory ones;
- EBRD requires OVNS to correspond to banks standards while it is difficult for developers – could SER be useful here?
- USELF understanding of the EBRD expectations: to get a picture on what is going on with environmental and social impacts of the AES development;
- For USELF selection team – recommendations on how to assess the projects from environmental point of view?
- USELF target group – developers and investors;
- USELF has a role to prepare training and workshops on capacity building, joint planning of workshops could be very beneficial

4.	Council of the Study of the Productive Forces of Ukraine (SOPS)	National Academy of Sciences of Ukraine (NANU), research center	Ukraine Kyiv, Tarasa Shevchenko blvd, 60, off. 1102 Khlobystov Ievgen, Heard of the department of sustainable development and environmental safety. Mob. 066-221-01-99 khlobystov@rvps.kiev.ua	Nov 24

Summary

All initiatives on alternative energy development in Ukraine will be very positively accepted by the society. Energy strategy of Ukraine till 2030 includes the chapter on alternative energy sourced development. Land shall not be an issue in terms of placing the power plants, but land exhaustion could be a problem if a biofuel is produced. Land property could be a complicated issue. In Crimea, local population has negative perception of wind power generation because of Schelkovo project; some of the local energy needs in Crimea are met by local oil resources. Percent of energy produced by alternative sources is very low, while some local environmental impacts (noise from the wind turbines, sun reflection harmful for people and animals from solar installations) might be significant. No region-wide environmental limitations for alternative energy sources development could be identified. Ukraine has, on the one hand, vast territories suitable for alternative energy sources (AES) development; on the other hand, it has certain negative experience, since the AES were developed on the territories with high population density and recreational values. In general, electricity demand in rural areas in Ukraine is decreasing. Therefore, it is necessary to balance the needs and the possibilities, taking into account local conditions. SER as a tool has big potential to help to achieve this balance.

There is a potential for small hydro plants development in the Central Ukraine – but for on-site consumption.				
5.	Taras Shevchenko National University of Kyiv	Ministry of Science and Education of Ukraine, university	Ukraine Kyiv Glushkova avenue, 2, r. 417 Department of socio-economic geography Faculty of Geography, National Shevchenko University, , Mezentzeva Natalia, associate professor Mob. 050-858-41-73 , provotarnat@ukr.net	Nov 24
Summary Ukrainian mentality and habits are pushing towards traditional energy generation sources, even if they are giant thermal power plant polluting environment. People are ready to trade their long-term benefits for immediate convenience. If shown the benefits of AES development, people will start to overcome negative perceptions of innovations. Local initiatives on AES development are very rare				
6.	National institute for strategic studies	Other central bodies of the executive power	Ukraine Kyiv, Pirogova str, 7-a Tel: (380-44) 234-5007 fax: (380-44) 235-2060 http://www.niss.gov.ua/ Vyacheslav Potapenko, Chief Expert on technogenic and environmental safety Mob. 067-408-14-54 potapenko@ukr.net	Nov 25
Summary Problems that alternative energy development could face: permitting process, land acquisition, local authorities resistance. Prices for electricity supply (for the customers) as stand now do not encourage alternative energy development. Return time (income) is still high for such projects. Public opinion is relatively easy to manipulate, especially in distant locations. Alternative energy development needs to be supported by regional (oblast) authorities. Heat supply is problematic and expensive in many regions, while the electricity supply is less so. It is possible to arrange the contacts to the Association of the mayors of small cities of Ukraine. Regionally speaking: southern parts of Ukraine – it may be potentially interesting to develop biogas projects; mini-hydro: Carpathians, Podill'ye. Ukraine exports electricity and the demand is not likely to increase in the near future, especially if the efficiency will grow. Ukraine consumes more electricity per unit of industrial production than any other country in Europe, so the demand is likely to decrease. Alternative energy projects are interesting to small consumers – distant farmers, hotels, resorts, small towns with their own renewable energy resources. In the small towns creation even of a few jobs is important.				
7.	Verkhovna Rada (Parliament) of Ukraine, Committee on the issues of fuel and energy complex, nuclear policy and nuclear safety	Organ of legislative power	Ukraine 01008 Kyiv Grushevskogo str 5, Tel +380-44-2552575 Belyaev Yuri, adviser, deputy head	Nov 25
Summary				

	Ukraine has significant potential for biogas projects development (large areas with corn). In general, the potential of the AES is low, the carbohydrates will remain the main source of energy for more than hundred years more. Green tariff is unprofitable, and Europe has already realized this fact and is shifting the emphasis to energy efficiency. Strategic task of the Ministry of Energy and Fuel of Ukraine is to reconstruct (rehabilitate) the gas transportation system. First solar plant in Crimea (near Evpatoria) is not operating (not profitable). Projects supported by USELF might appear non-profitable when the Bank terminates its support. Ukraine has not exhausted its resources of hydrocarbons, so the aim is to increase the efficiency of oil and gas extraction. In principle, USELF projects might be of interest regionally. There is a clear need to prepare and disseminated proper information about the project.			
8.	Zelenyi Svit / Friends of the Earth Ukraine	National NGO	Ukraine 04070 Kiev, Kontraktova square 4, phone: +380 567 781301 (Kiev office) web: www.zelenysvit.org.ua Sergii Fedorinchik, chairman. Email: fedoryn@gmail.com	Nov 26
	Summary Energy inefficiency of Ukrainian economy is overestimated: shadow economy is not accounted for in the official statistics, therefore actual GPD is bigger and energy consumption per unit of the GPD is lower than is being reported. Governmental bureaucracy is a real limitation to AES development; small projects are very beneficial (in social and political terms) way to develop AES usage in Ukraine. Local population is very knowledgeable, and, when given a chance, could participate meaningfully in the discussions on energy-related projects. It is important to ensure that proper public notification takes place, local newspapers and other mass media are identified correctly. Small hydro projects are mostly possible in Carpathians, where recreation activities still have scattered character; possible stakeholders include fishermen, foresters, elderly residents; private and public agencies interested in water tourism development. It is widely accepted that Crimea's future is linked to AES development. Biomass potential is significant in Ukraine, since there is a lot of land currently not being processed, especially in western Ukraine. In general, environmental issues are not the priority for Ukrainian political elite. However, general perception of AES development is positive, including those of the EBRD. Ukrainians mostly consider themselves Europeans; there is a need to disseminate information on the bank activities better.			
9.	UkrHydroEnergo	Professional association	Ukraine 04112 Kyiv, Tankova str, 8, of.15. tel 380 44-4560024, web: www.ukrhydroenergo.org Karamushka Oleksandr, executive director, email: postmaster@ukrhydroenergo.org	Nov 26
	Summary UkrHydroEnergo is a member of international Hydroelectricity association, the aim is to support hydro energy production in Ukraine, activities include drafting programs and strategies, working with the government and a Parliament of Ukraine. Association was created in 2002; the founders were involved in large hydro-energy. In 1996 WB financed rehabilitation of Ukrainian hydro power plants (with the support of Ukrainian government). Later on the route the small hydro representatives started to join, since 2004 association started to be involved into the mini hydro, in particular, lobbying for green tariff and been part of development of the legislation. Currently, there are big efforts in large hydro energy development; in particular, at the Dniester pump storage first unit is almost complete. Association has analyzed the state of mini hydro, but we could not get approved the concept of			

	mini-hydro development by the government (not because of the lack of the support, but because of the volatility of the political regime) . There were several ideas on developing the combined wind and hydro but they have not been realized and maybe it's a positive fact – till recently (last year) there were no clear understanding of wind energy efficient use. Hydro projects are easy to calculate carbon potential, easy to obtain license for green tariff; they might be used to help Ukraine to switch from gas and coal combustion to AES. World Commission on Dams has its own threshold on 'small' projects, and it is widely used. Main regulatory obstacle currently is that the legislation does not allow privatizing the facilities for any hydro installations. This is a very important obstacle. Many mini hydro plants were even under the Soviet times not state owned - they were owned by the collective farms. 75 operating plants belong to the states (Oblenergo) currently, the rest are private. If the privatization is allowed that will be the push for development. There are about 100 -120 old abandoned plants in Ukraine; they were phased out because of nuclear energy development + heat production, so small hydro was not needed. Out of these old plants – 10% in state ownership, the rest is private. Association thinks that the mini hydro plants development shall be the part of regional development planning – villages would love to have their own generation capacities. Copy of the concept (submitted but not approved yet) of mini hydro development could be obtained from the association. Currently there is a developer, member of the Association, Mr. Nikitorovych (private firm Novosvit) who is responsible for a small hydro development, he has 17 (partly rented) operating small hydro plants. KEMA consulting form prepared the report to EBRD on AES development in Ukraine, incl assessment of the potential of small hydro power plants. Energo Strategy of Ukraine adopted in 2005 establish the targets till 2030 and foresees development of 52% potential of mini hydro in Ukraine, while Kema report indicates it's higher. UkrHydroEnergo is an NGO and do not claim to have a full coverage; they did implemented a survey of regional Oblenergo on the potential of small hydro development. They are not aware of any studies on potential environmental impacts of small hydro. Some of the NGOs are against any energy project development. There have not been any public discussion on mini hydro so far but they surely will come. There are no plans so far to build new mini hydro plants in Ukraine, we are mainly talking about restoration here. Potential –5% resources are only developed; mainly in Carpathian mountain. Some of the oblasts (Chernovtsi, Lviv) have their regional programs on small hydro power development. Hooking to the grid legislatively is not a problem for small hydro projects, since the Cabinet of Ministers decree in 2009, but implementation is a problem. It is Oblenergo who is now responsible to build the transmission line; there is no hostility but sometimes lack of financing and motivation. Small projects with on-site consumption are attractive to remote farms (need to refrigerate dairy products), recreational facilities, etc. Market situation is favourable for renewable projects: green tariff, on the one hand, and potential for carbon trade, on the other. Small hydro projects could be a part of anti-flood state program for Carpathian regions, there shall be staff in Ivano-Frankivska and Ternopilska oblasts responsible for flood control, they might be involved into small hydro projects development. There is, though, significant knowledge gap: potential investors are unfamiliar with the EBRD requirements and practices. If the level of efforts and potential revenue are clear, investors will apply to USELF; however, it shall be taken into account that majority of the investors are nor English-speaking, their time is limited, they will not read lengthy manuals on environmental procedures. Capacity building is required.			
10.	Foundation for the Development of Environmental and Energy Markets	Non-commercial organization, dedicated to the promotion of market-based	Ukraine, Kyiv, telephone: 38 (044) 483-4215, Vadim Diukanov, Executive Director, E-mail address: vadim.diukanov@fdeem.org.ua	Nov 29

		environmental and energy programs in Ukraine		
Summary Ukraine introduced green tariff in order to decrease consumption of oil and gas and encourage AES development and usage. Power generation with the use of renewable sources has very good carbon trading potential. JI projects are snowballing in Ukraine. Biogas and biomass has significant potential in Central Ukraine, small hydro, apart from obvious Carpathian rivers, are possible in Central Ukraine as well. First enterprise to be licensed for green tariff is the private developer in Vinnitsa who rehabilitated an old small hydro power plant. Now he has more than 17 similar projects. In principle, the population is likely to accept AES projects, especially if notification and consultations are properly arranged. Body of professional consultants acting in the field of energy efficiency, energy saving, energy and environmental audits, and preparation of applications for financing according to the international requirements, is growing in Ukraine				
11.	Mama-86	National NGO	Ukraine 03057 Kyiv, 4 Yangel Academiscain st, of 126, web: www.mama-86.org.ua Anna Golubovska-Onisimova, president, email: anna@mama-86.org.ua	Nov 30
Summary Mama-86 has both environmental and social focuses, works in environmental enlightening and education in environmental and social matters; also participates in environmental policy development, namely adoption of National Environmental Strategy. The later talks a lot on AES development, and includes an obligation to green the industrial sectors, namely to increase the usage of AES in the industry up to 15% of total energy consumption. Mama-86 (staff member Irina Malysheva) participates in the activities of the public councils of the Committee on Energy efficiency, environmental investments, and in International Sustainable Energy movement. SEA/SER problems in Ukraine are: general lack of institutional capacity and environmental governance; however, SEA is mentioned several time in the above Strategy. SEA is problematic because of negative experience under ESPOO convention with the Danube –Black Sea channel and is seen through the prism of international politics. There is an external incentive for SEA development: cooperation with the European Union, horizontal adaptation of legislation – key to environmental legislation harmonization. Environmental administration in Ukraine needs a lot of capacity building in order to be able to use such tools as SEA. For the SER process, it is better to be guided by the EU SEA Directive, since it is of interest to the Ministry as a preparation to the adoption procedure (association agenda priorities). AES development could have very positive social impacts (case of 'green jobs', influence on infrastructure), it is beneficial have close contacts with local level and keep the participatory approach on programmatic level. Permitting process in Ukraine does indeed need to be streamlined, but the way how to achieve this now is very questionable. Environmental and development authorities need extensive technical support. It is a big difference between making the permitting process easier for developer and making same process better. Currently by streamlining the permitting process the authorities mean deleting obligatory character of national EIA system. Level of information availability in Ukraine is very law, despite regulatory requirements. Mama-86 is involved into monitoring of the quality of drinking water, basing on national statistics and some own measurements ourselves (nitrates are big problem in drinking water in Ukraine). Other problems are: air pollution – from the industry and transportation; water pollution; wastes – we are diving in all types of wastes; land management. Wastes: Up scaling never started, not much recycling, and old fashioned incinerating facilities – we can't				

	avoid incineration still. There are some obsolete pesticides still on the territory of the country. Rhetorical question: how do you manage municipal wastes without involving public? No way to do it! While public awareness is quite low. People welcome biomass technologies to produce heat; biofuel is not popular yet + competition for land use is still possible; solid biomass burning is source air pollution (dust, solid particles) – no monitoring results are available so far. Many people are using solar panels to produce heat even around Kiev. A lot of problems with wind turbine – noise, birds, vibration.			
12.	All-Ukrainian Ecological League	National NGO	Ukraine 01033 Kyiv Saksaganskogo st, 30-B, of. 33 tel +380-44-2893142, web: www.ecoleague.net Timochko Tetyana, Head, email: vel@eoleague.net	Nov 30
	Summary Potential impacts of AES development: solar – installation and decommissioning stages; wind – noise, impacts in birds and landscapes; biogas – associated infrastructure of big cattle breeding farms; hydro – changes in the streams and discharges. Talking about procedures: the NGO support ratification of Ukraine of the SEA Protocol; has certain negative experience with EBRD treating negative environmental impact in a mechanistic way (Odessa region). Ukraine is very diverse, so it is important for the SER to take regional approach. By the League data, 11 oblasts of Ukraine has sufficient potential for wind energy to be used to meet the domestic demand (Crimea, Donetsk, Dniepropetrovsk, Zaporozsie, Lugansk, Nikolaev, Kherson, Odessa, Zakarpat'e, Lviv), and 6 out of them could meet all domestic demand by the wind energy usage. Risks of and for AES development are: land issues, noise, impacts on birds, visual and landscape impacts. Western equipment is less harmful, but in this case Ukrainian investors are supporting Western production; it is better to develop local but modern production. From the point of view of availability of raw materials, maximum productivity could be expected from biogas projects. Solar and hydro projects could have regional (not national) importance; if on-site consumption is considered such projects could be of significant social and economic importance (locally). Ukraine actually sells 25% of electricity, so the discussion shall be around efficient usage rather than construction of new facilities, Development of small hydro projects in central Ukraine shall be very careful, since the flow is already small and sometimes insufficient for the water to move, hence eutrophication.			
13.	Fitchner/Imepower	Firms associated with management of the USELF lending facility	Dr. Ralf Walther, Project Manager, Ukraine Sustainable lending Facility, 4th Floor, Office B, BC Office Towers 42-44 Shovkovychna Str. 01601 Kyiv, Ukraine Tel: +38099-5342027 Ralf.walther@uself.com.ua www.uself.com.ua	Nov 30
	Summary Discussed purpose of the SER and how it relates to the rest of the USELF lending facility. Jay Abbott provided an overview of the purpose and scope of the SER/SEP. Dr. Walther provided a description of the types of projects making application for funding to USELF. To date, they have received 25 applications for a broad mix of wind and hydro projects. No applications as of yet for biofuels or solar projects but they hear these are coming. In general, these are smaller projects (>10MW). In their assessment, the principal needs in Ukraine with respect to development of renewable energy projects are the need to upgrade the transmission infrastructure. They see socio-economic rather than environmental as the key drivers. The conclusion of this meeting was to agree to a second meeting to serve as a workshop where B&V's ren2eable energy team would come back to review the			

applications made to date to better understand the types of projects coming in to the lending facility				
14.	Ukrainian society for the protection of birds (USPB) / BirdsLife Partner in Ukraine	NGO	Kyiv, Podvysotckogo str. 6A, office 40, tel. (380-44) 284-71-31, mob. (38-097)0-777-020 Dr. Oleg Dudkin	Dec 1
Summary General information. USPB has experience in both – Ukrainian OVNS and international EIA. Their scope – birds and bats. USPB worked out the methodology for identifying territories for development of renewable energy projects. They marked territories in green, yellow or red colour in accordance with possible impact of the project on birds and bats. Green – insignificant impact, yellow – need mitigation or compensative measures, red – destructive impact. Also identifying important birds areas (IBA) and protected areas. Organization is concluding the memorandum of understanding with the Institute of renewable energy NAS Ukraine. Perspectives. Most perspective territories for developing renewable energy (wind farms): Khersonska, Odesska oblasts and Crimea. Data available: USPB owned wide range of information (detailed, covered all regions of Ukraine). They provide it by request. GIS format is unavailable due to absence of programme support. All data and reports available from Brussels Headquarter of BirdLife. NGO published its official opinion in renewable energy issues in the web (http://birdlife.org.ua/wind_01.htm). Possible problems: dishonest competitiveness for funding. There was some attempts of project simulation – gathering information, organizing public participation, then get the funding and disappear. Now consulting firms struggling against such practice. This is another point for communication with Institute of renewable energy is attempted to avoid pseudo-projects. New governmental authorities are very interested in developing projects on renewable energy, but frequently not taking into consideration existing or planed (under government support) protected areas. Environmental issues: Wind farms course direct and indirect impacts on birds and bats. Direst: crashing in turbines. This impact increasing due to uncontrolled hunting (there are about 6000 official hunters). Usually birds can recognize and avoid turbines, but in panic they didn't see barriers. Another point is a fog that forced birds to fly lower (for example on Sivash). Indirect – destroying ecosystem, lost birds habitat. In USBP opinion the indirect impact is more serious and dangerous because of its long-term character.				
15.	Public enterprise "Inter-Branch Scientific and Technological Center for Wind Power Engineering" & Institute of renewable energy	National Academy of Science of Ukraine	Kyiv, Chervonogvardiyska str., 20a Tel / fax 044-558-58-09 Dr. Stepan Kudrya – director (mob. 067-465-66-68) PhD Borys Tuchynsky – deputy director on scientific work, Vadym Tochenyj - deputy director on public and authority communication (he is also project manager "Nature Energy" in state agency National Projects under patronage of the President of Ukraine)	Dec 1
Summary				

	General information: enterprise licensed for wind and solar energy projects designing and OVNS (they do it on EIA structure). They developed "Programme for renewable energy development in Ukraine for period on 2030", that provide for 30% of overall energy manufacturing from renewable sources. The programme is not ratified yet. Data available: detailed data base on different characteristics concerning wind energy for 30 years period. They owned acting weather-posts for data collecting. Possible problems: the wind energy projects in scale of USELF are not profitable and technically and economically feasible. Another point – lack of long-term financing. Projects on renewable energy in framework of green tariff are recompensed in 5-7 years that is too long period for local investments. Perspectives: projects on solar energy.			
16.	National Ecological Center of Ukraine (NECU, partner of Bankwatch international)	Country branch of international NGO	Ukraine 01032, Kyiv, Simona Petluyry str,1, Botanical garden after Fomin of Kyiv University, tel. +380-44 238-62-60 necu@i.kiev.ua, vladlena@bankwatch.org Olena Miskun, national coordinator, email: miskun@bankwatch.org	Dec 2
	Summary NECU has experience of monitoring the banks activities in energy efficiency field; in particular, conducted brief research of the awareness of potential users of the loan on energy efficiency. Availability of information is very low, incl information on USELF. Ukraine has centralized energy system which might be a negative incentive to renewable development. Grid is a problem – government wants to build a lot of transmission lines, but decentralized system would have been so much better for Ukraine. It is beneficial to develop small renewable projects, such as less than 5 MW (incl micro). NERC encourages small producers to connect to grid and if they have problems they could apply directly to NERC. All Ukrainian territory has very big potential for use of renewable, not just Carpathians and Crimea. For example, Kiev has very big potential for use of PVB panels. Biomass is also very important in Ukraine, NECU is interested to hear about new projects; however, NECU position on biofuel is negative (see separate document). Small hydro projects produce energy but in some cases totally destroy ecosystems; there are about 100 not-working hydro-power plants in Ukraine. Negative impacts of small hydro projects include limitations for the potential tourism; although if the technologies that allow production without making a damp are available, they will be much less harmful. There is a problem for AES development in Carpathians – no system for wastes collection is present there. Therefore the solid domestic wastes are thrown into the river, so the developer needs either to screen the turbine or to constantly clean it. NECU thinks that before installing new capacities we need to look at energy efficiency. No experience with wind mills – so no concerns expressed so far. EBRD has good ideas but has difficulties in finding borrowers since it has very strict requirements. Bank itself also sometimes employs 'salami-slicing' approach (considering the 4-lines transmission line as 4 separate projects). NECU main issue is to persuade the Bank that it should make the developers to stick to the EU legislation; but Bank's criteria are sometimes too tough for local investors. Concerns on solar energy: the panels contain toxic elements; issue of decommissioning and operation (proper disposal); contain of the cooling liquid. Solar is very efficiently used for heat production (in Crimea - water heating). In each case, local concerns and location specific are to be taken into account. It is necessary to increase social benefit of local production, incl. national production of pv panels. As for biomass, significant threat is that the wood from the territories that are polluted by radiation is used. On the other hand, wood industry does not utilize the wastes properly, so there is a potential for biomass projects, although Ukraine is not that rich in wood. Concern of straw using is related to potential exhaustion of soil. Usage of husk from sunflower and oat is more preferable. Potential of co-generation plants is significant. Talking about potential of conflict of interest between local farmers and biomass developers - nobody will complain since they will			

	be getting cash, but the issue of soil fertility will still exist. Biomass projects using manure have the most potential, since wastes utilization from big cattle farms is a very big issue, and the big farms already have facilities and the space. There are precedents in Ukraine where municipal buildings are using biomass (wood, peat) and co-generation (Manevichi, Volyn'). Talking about Ukrainian OVOS procedures, NECU sees strategic assessment in Ukraine is still building on OVOS experience. Strategic assessment is a part of the SER Law. Changes that are being introduced, namely trying to lift the OVOS requirements for developers, decrease national EIA (OVOS) system efficiency; but strategic assessment will stay; however the clear procedures for any strategic assessments are not present. There is a parallel life of international (EU) assessment and national assessments going on in Ukraine around internationally financed projects			
17.	National Academy of Sciences, institute of ornithology	Research center	Ukraine Kyiv Volodymyrskaya str 14 Gleb Garvis, Head of the Department	Dec 2
	Summary Impacts on the fish, its migratory routes and spawning fields are the most important negative impacts of small hydro projects. For example, the rare trout species in river Teresva in Zakarpat'e is known to be affected by the small hydro power plant. Solid domestic wastes are the limitation factor for hydro projects on Carpathian rivers – there is no system of wastes collection and disposal; plastic bottles are especially an issue. Pump and storage plants have negative impacts on the construction stage only. Birds benefit from hydro plants since they get additional water surface. There is no problem of water reservoirs pollution by the birds feces, since the birds population is limited by hunting. Own research is usually the main source of information for OVOSes development. There are not many GIS professional working in EIA field in Ukraine. National Academy of Science is getting an increasing number of requests on information about possible siting of the AES development projects from oblast administrations. European experience of siting the wind turbine would be very interesting to Ukraine – how to resolve the issue of birds migratory routes? Impacts of the wind turbines on the flora and reptiles are present on the construction stage only, and they are reversible. Crimean government is taking environmental review of the projects very seriously.			
18.	Presentation at EBRD on Commercial Use Biomass for CHP Applications (in Bulgaria, Romania, Ukraine, Belarus, and Turkey).	Separate EBRD-funded project	**Dietmar Hagauer, Consultant** Osterreichische Bundesforeste AG (OBF) Pummergasse 10-12 3002 Purkersdorf, Austria Phone: +43 (2231) 600-5590 Email: Dietmar.hagauer@bundesforste.at **Local partner, Alexander Ivanov, Project Manager** Optimus Limited 45 A Dnistrovska St. office 8 Ivano-Frankivsk, Ukraine, 76018 Phone: +38 0342504605 Email: Optimus_development@ukr.net	Dec 2
	EBRD is funding a market analysis of the commercial use of biomass for CHP applications. Meeting was a stakeholder meeting to announce the initiative			

in Ukraine. Similar meetings have been or will be conducted in the other countries. Project has multiple tasks, but main focus is to identify the commercially viable biomass fuels and the regulatory framework needed to support their development. Study is not a full assessment, only a "seed-study" to help trigger investment. Total budget is 500,000 Euros.

According to EU definitions, the following definitions and classifications are applied to various bioenergy options: Agricultural Biogas; Landfill Gas Forestry Residue; Biomass; Wood (Forest Products); Agricultural Products; Agricultural Residue; Biodegradable Waste; iowaste

Tasks include:

1. Inception report (done)
2. Assess market for supply, distribution, and use of biomass. Include resource potential, forecast, biomass supply chain, technologies employed, cost structure, potential
3. Legal and regulatory framework
   Identify main potential and constraints
   Subsidy schemes to be reviewed
4. Environmental and social assessment of each option based on EBRD Environmental and Social Policy 2008 (Note from MH: perhaps SER team should review too)
5. Survey of participants including biomass production
6. Examine opportunities for scaling up in the country
7. Summarize findings

Perform SWOT analysis for investment. CHP is the only focus of the initiative (500 kW – 30 MW). Example would be district heating for villages. Stakeholder feedback:

Focus should be on thermal energy production, rather than electric because there already exists an electric green tariff for solid biomass. Currently, thermal applications must compete with subsidized natural gas. Ukraine has already assessed biomass potential, so how will this add to the assessment? There is a huge potential in the agricultural sector, but there are no subsidies available to promote it.

Focus is on producing biomass fuels for export, rather than for CHP applications in the country. Response is that study is focused on in-country applications. Biomass certification is also problematic because there are many certification schemes and certification organization in EU. There are no certification organizations in the country. There are existing partnerships with Germany and Netherlands to promote biomass in the country.

19.	Ministry of Agricultural Policy of Ukraine – Department of Engineering & Technical Support	Executive power	01001, Kyiv, 24, Kreschatyk srt. Tel: +380 44 226 30 62 Mykola Datsenko Email: datsenkom@ukr.net	Dec 2

Summary

A general comment about the meeting was that the interviewee was very short of time and seemed somewhat irritated by the questions. No comment on the outlook for alternative/renewable energy development in Ukraine. Mr. Datnseko alluded to possible changes in the law relating to biomass and referred to a legal study (possibly the one we already hold). Mr. Datsenko's main point was his frustration with the fragmentary nature of permitting for biomass fuel production; and the disjointed studies that have been undertaken of each part of the production chain. The need for simplification and

	streamlining was his main point made during the meeting. Mr. Datsenko felt that there was the risk of conflict between the use of land for food crop production, and for fuel production or other renewable activity. Some interest expressed in being involved in efforts to join-up the consenting process for biomass fuel production.			
20.	Tavricheskiy National University named after Vernadskiy Scientific information center 'Technologies for sustainable development'	consultancy	95007 Ukraine Simferopol Vernadskogo av, 4 Tel +380-652-637576 Karpenko Sergei, executive director Email: s_karpenko@rambler.ru	Dec 5
	Summary Big companies are investing money in wind energy development in Crimea now. They involved big environmental consultancies with full European project cycle, incl environmental studies, ornithology, archeology. Market is very competitive; it is possible that all 'wind' investors will come under one umbrella soon. Foreign investors register Crimean firms and pay local taxes. Disadvantage – no correlation between regional and local levels of planning. Projects that are likely USELF clients are interesting to individual farms, tourist objects. Lamb raising is being restored in Crimea currently, there is a need to provide electricity to remote farms. Integral approach is necessary here: small wind turbine, biogas, heat pump, mini hydro plant. Farmers only generate 2% of total output in Crimea but they are very important socially: create infrastructure, jobs. Various projects are possible, for example shrimp farm using thermal waters in Sakskiy district. Geothermal resources could be used for municipal purposes (heating). Main institutional barrier for AES development in Crimea – corruption and lack of reliable local partners for foreign investors. Confirm that very significant part of land is not used; wind turbines could be placed on non-fertile lands, pastures. District state administration has proper knowledge to manage land allocation (they have reliable local information on roads, etc. Potential conflict in land use for wind turbine is only that they might prevent infrastructure development; on the other hand, they create jobs and facilities. There is a PHV solar station near Simferopol. Solar energy efficiency is doubtful for Crimea. Existing objects of AES are too few, no possibility to prove assumptions on the impacts. Part of Crimea is so-called depressive districts (land with low fertility, complete absence of engineering and social infrastructure), therefore, job creation, even on the construction stage only, land rent might very important there. Planned big projects cover Crimea demand 2 – 3 times, so there will be necessary to "ring" energy. First facilities will start to be developed by 2011; nobody has considered that issue yet. Current environmental situation in Crimea is not problematic. Air emissions are lower than 20 years ago. Main tasks – waste water treatment and wastes. Waste is a very serious problem for Crimea. There are wastes of all categories in Crimea (hazardous wastes, such as medical wastes and obsolete pesticides, industrial wastes, domestic wastes)., and almost no treatment facilities for any of them. It is very difficult to allocate the land for landfills in the territories were recreation is concentrated. There is no state-supported holistic approach to AES development in Crimea. Still, Crimean government developed several strategic initiatives in attempts to harmonies priorities: 'Environmentally safe Crimea" conception and state program . If the power to approve investment project will be granted to the Council of Ministers, this will ease a way for big companies and complicated the way for the small ones. There are way too many system uncertainties when working in Ukraine.			
21.	Crimean Republican	Regional NGO	95022, Ukraine Crimea	Dec 5

	Association EKOLOGIYA i MIR		Kechkemetskaya str. 188, aprt. 1, Simferopol Tel/fax: +380-652-693-143 http://www.ekomir.crimea.ua Tarasenko Viktor, president Email: info@ekomir.crimea.ua	
Summary Crimean NGOs, and Ecologia I Mir in particular, could be proud of two achievements: closure of Crimean nuclear facility project, and cancellation of development plans for Donuzlav (area of high recreational value). There are precedents in Crimea of developing micro-wind plants (3 – 5 kWt). Population always raises a question of certain compensation for the usage of the territory; some forms of benefits are: jobs, local generating capacities, infrastructure, local taxes. Central, Nothern, eastern Crimea – rural areas are underdeveloped, in need of energy supply (in particular, from local projects). It is necessary to carry out information campaign to support small and medium size projects, since there is a bias towards large projects currently. No potential adverse impacts on AES development; straw is a potential sources of biomass but collection is problematic. Thermal energy: in 2005, COWI and Danish development agency estimated the potential as positive, identified 5 prospective sites. Wind energy: potential conflict with ecological net of Crimea. In 2010, Eco-net was officially endorsed in Crimea. Any project in Crimea shall be approved by the Crimean Committee on Environmental protection, taking into account the eco-net. The eco-net includes with the nature protected 'nuclear', reserved zones, corridors. Small wind projects could be even more damaging then big ones: lower height of the turbine; there also could be a vibration problem. Small hydro – potential limitations: almost all small rivers are included into the eco-net; lower parts of the rivers are in poor shape, therefore it is not advisable to use the upstream part. Biomass potential is big, conflict over the land use is unlikely, since, first of all, no competition for the raw materials; secondly, land is available and sometimes not currently used. Solar energy is feasible when used for heating and hot water. Wastes – main problem of Crimea currently, there is no facility in Crimea to accept and treat hazardous wastes, therefore it is necessary to include hazardous wastes processing into the project costs of solar energy (cells). Decommissioning and cumulative impacts are not considered under national EIA system. There are some talks on using the natural rent approach (payment to local residents for the use of wind power, especially when investor/developer is not a local resident).				
22.	Tavricheskiy National University named after Vernadskiy Department of geo-ecology	University	95007 Ukraine Simferopol Vernadskogo av, 4, of. 326B Tel +380-050-8038055 Prokopov Grigoriy, senior lecture Email: pleco@i.ua	Dec 5
Summary Assessment of the wind power plants impacts on fauna in Crimea are mostly now carried out according to best international practices (such as EUROBAT, for example). No info on impacts assessment on insects				
23.	Society of Geoecologists	Youth NGO	95007 Ukraine Simferopol Vernadskogo av, 4, of. 329, Tel +380-652-608590	Dec 5

			Rudyk Oleksandr, deputy head Email: geo2004@crimea.edu	

Summary

Minihydro in Crimea could be problematic, since almost all small rivers upstream part is in the protected areas. No potential significant negative impacts of AES development, apart from this. Wastes are the most serious problem for Crimea currently; no system for solid domestic wastes separation, issue is very commercialized and even politicized but this does not help to resolve it. Ecosystem services assessment could be a useful instrument for assessing the impacts of AES development on the regional scale; there are attempts to use ecosystem services assessment in the purposes of SEA (Bakhchisaraiskiy district development strategy, Crimea)

24.	Association of the farmers of Crimea	Professional association	95000 Ukraine, AR Crimea Simpferopol, tel +380652-276545, mob +3800951792275 Yuri Komov, head Email: komov.crimea@mail.ru	Dec 6

Summary

4 sources for alternative energy production in Crimea: sun, wind (eastern and western Crimea), Fuji electric already shown an interest in production, biomass, thermal waters (2 wells operating in Saky with temperature range from 40 to 80 C). Biomass has a potential, but currently the amount of the cattle is decreasing while the dairy products are being imported. There are attempts to encourage cattle raising; currently more than 70% of all cattle farms are private. Straw could be used as organic fertilizer, but there are some experimental plants for straw processing and burning; co-generation would be the most beneficial way. Straw should not be withdrawn from the ecosystem fully, shall be at least partly returned to soil. There are precedents of up-to-date technologies usage in Crimea – Dannon is introducing the practice of milk collection according to European standards. Wave energy is another potential alternative energy source for Crimea. Potential stakeholders for USELF: council of women-farmers of Crimea; information department of the Ministry of Economy (would assist in identifying investors). Farmers might be interested in the project like USELF but they experience a shortage of the readily available funds. Would have been interested in electricity generation for on-site consumption to decrease energy costs, but green tariff does not work in this case.

Possible environmental impacts of AES development: wind – vibration, birds migration (swan islands in Crimea are very sensitive territories), there are nestling grounds in Eastern Crimea that should not be disturbed. Thermal waters: withdrawal without pumping back could be damaging to geology; probably more feasible to use Crimean thermal waters for medical purposes. biogas is the most promising technology – no wastes; biomass – not a sustainable way but could be used for local consumption. Conflicts of interest is only possible when the interests of local communities are ignored. For example, farmers do not have for monitoring possible soil exhaustion due to biomass production. Existing AES projects in Crimea are local in scale and have not caused any conflicts. Almost no concerns on visual impacts (apart from some NGOs). It is necessary to be aware of local social circumstances for the investment projects to be successful, otherwise it is easy to provoke unjustified protests. Main environmental problem of Crimea- current state and preservation of recreational and curative resources; in particular, the curative muds are only used up to 10% of their potential, but the lakes with these muds are being polluted.

25.	Chamber of Commerce and Industry of Crimea	Professional association	95013 Ukraine, Crimea, Simferopol, Sevastopolskaya str, 45, tel +380-652-248638 Evgeny Savinov, first vice-president email: cci@cci.crimea.ua	Dec 6
Summary Chamber of Commerce is one of the oldest and most active in Ukraine. See their mission as a third force aiming in assisting investors and the state, local people, local businesses to partner. Small energy generation projects in Crimea have big future (in particular, solar projects – at the eastern coast. Small projects shall be directed for generation electricity for local consumers; in general, small business does not have funds to invest; but small energy producing projects might be possible. Crimea development: 3 priorities: tourism, agriculture, and only third – industry. Small energy generating projects are relatively expensive; investors experience lack of knowledge, information, skills necessary to invest to AES development, Chamber of Commerce could assist. Small businesses might go broke in 2 years when the WTO conditions come into full force, so there is a clear need in new market segments. Social problems of Crimea: certain inter-nationalities tension, but not that much; this tension cannot pose a threat to investment climate (is not significant enough); drop in production, unemployment, people have to take the jobs that do not require any professional skills. Loss of technical engineering education on graduate level, loss of high tech engineering services at the enterprises. Positive impacts of investments projects (like supported by USELE): need in engineering qualified labour. Land issues: land is available, it is possible to use existing facilities; up to 80% (!) percent of land in some districts is not been worked on. Village councils in their majority do not have development master plans, therefore land allocation is possible but problematic. Demographic problem: aging population in the villages, young people left. Currently, village council land could not be rented, sold, etc. without the population consent. New draft of the law 'On the government of Crimea" gives land allocation privilege to the government exclusively. Chamber of Commerce has conference facilities and will be interested in cooperation with USELF, including promotion and dissemination seminars, trainings for investors, etc.				
26.	Ministry of Economy of Crimea, Department of investment policy and foreign economic activities,	Executive power	99095 Ukraine Crimea Kirova av, 13 tel +380652 544290 Okgrugin Michael, leading specialist. Email: crimea.investment@gmail.com	Dec 6
Summary Crimea needs foreign and local investments, and government is very supportive and ready to do what it takes to attract investors. It would be useful if EBRD (USELF) send a letter to the government of Crimea, officially notifying them on USELF launch and inviting to cooperation				
27.	Ministry of Fuel and Energy of Crimea	Executive power	99095 Ukraine Crimea Kirova av, 13, of. 363 tel +380652 544281 Zhdanov Vadim, deputy minister	Dec 6
Summary Currently, in Crimea there are no projects that fall into USELF criteria; existing and planned projects are much bigger; although such projects will be				

	beneficial to Crimea. It is possible to find investors for any market segment. Local projects are needed in the places where the access to the grid is difficult – almost no such places in Crimea. On the other hand, small and medium projects are not such profitable as big ones. Farmers are interested in small mobile plants; co-generation is one of the promising directions but it cannot use the green tariff. There are some pilot co-generation projects using AES. Crimean grid (transmission lines) is a bottleneck to big projects. Land allocation in Crimea goes according to national procedure. Many investors (in AES) use European procedures for project development (incl EIA), and there is infrastructure and skills in Crimea to follows them. Population perception towards AES is usually positive. There is a solar plant near Simferopol (ActiveSolar) with the capacity of 8 MWt, currently 2,5 operating already. Projects smaller than 50 M(?)Wt are not economically feasible. EBRD shall consider some flexibility and support electricity generation for on-site production. German scheme (population sells the energy produced with using AES on the basis of the green tariff, while buying it from the states by regular prices) would have been very useful. Crimea experiences growth in energy demand (5%) while energy per unit of output is dropping. If official letter from USELF is sent to the Council of Ministers, administrative support might be provided to potential investors.				
28.	Ministry of Economy of Crimea; Agency for Regional Development	Executive power of Autonomous Republic of Crimea	95005 Ukraine Crimea Simferopol, Kirova str, 13 Tel +380-0654-544271 Radin Yaroslav, deputy minister Email: yarad@ukr.net Kasyanov Pavel, Head of investment formation department, email: me@ukr.gov.ua Starodubov Alexey, director. Tel +38050-422-3180, email: avs_arr@ukr.net		Dec 6
	Summary Regional development agency is very interested and has experience in working with the EBRD. USELF projects are interesting – it is part of the regional development. Straw pellets for example would not need big investments – agency is open to present existing projects. There are companies interested in such projects – they will go and apply. Ministry of Economy feels this is not their field, though it is possible to seek state support to USELF applicants. Budget has stabilization fund targeted to support energy saving and environmental program. Position of the government: any project coming from partner donors is very welcome in the region, it is important for regional development. Conception on cooperation with partner organization does not provide state guarantee but ensures support from Verchovna Rada, Cabinet of Ministers, and local administrations. Head of investment department: EBRD has the procedures that do not correspond to our reality, they are lengthy and complicated. Projects on co-generation on solid domestic wastes are very interested to Crimea, could be applicants to USELF. Crimea is not that bad from environmental point of view; this is not an issue for investments. Agency has a strategy for economic development for Crimea. Crymenergo is aware of the grid problems and is searching for the resources for reconstruction. Any business has positive impacts on social processes (jobs, infrastructure), there would be no opposition. Public hearing could be implemented, there were precedents on the projects related to wastes management; they allowed implement complex approach, take into account local interests. Agency is interested in having joint capacity building workshops.				
29.	Creative union of scientific	Professional	95013 Ukraine, Crimea, Simferopol, Sevastopolskaya		Dec 6

	and engineering societies of Crimea	association	str, 45, tel +380-652-27-34-51 Aleksandr Slepokurov, Head email: slepokurov_al@rambler.ru Neonila Gracheva, president of Chamer of Commerce and Industry, email: cci@cci.crimea.ua	
Summary Society mainly deals with networking in engineering and R&D. As for renewable, our experience shows that thermal waters are practical for hot water and domestic heating; solar power needs substantial external investments; wind power is developed by external investors, nobody of local people is involved. Projects in USELF scale might be interested in recreational facilities, such as mountain hotels, spas, restaurants. In principle the grid density is sufficient, power supply is good in Crimea. USELF scheme poses a problem of co-financing that is very difficult to local small investors. If renewable energy is used on-site, project will be needed in technical and social aspects, but will bring no return to investor; therefore state support is needed to cover the necessary co-financing. Solar energy needs significant areas of land, while land is expensive in Crimea. If the projects on renewable energy are built in the remote areas where land is not fertile, then how they could be connected to the grid? In conclusion: the projects that USELF supports need state support as well. There is a big potential on biomass production and usage in Crimea, especially is agriculture is restored (grapes cuttings, orchards, corns – all potential biomass sources). Using of the agricultural lands for non-agricultural purposes is, first of all, illegal (the procedure to change land type is complicated and time consuming); secondly, if Crimea positions itself as a recreational territory, food production shall be developed. Development priorities for Crimea for something 20 years are: tourism; agriculture; industry, in this particular order). Eastern and Western Crimea need to be developed in a system holistic way. Planned wind plants are not going to have impacts on environment since their only need certain (not big) piece of land. Renewable shall be developed according to Germany or American's schemes (the state buys the electricity produced on-site and sells it to population by regular prices).				
30.	Republican Committee on environmental protection	Regional environmental authority	95022 Ukraine Crimea Simferopol Kichkimetskaya str 198, of. 101 tel +380-652-6165773 Aleksandr Lesov deputy head, responsible for Kioto issues Vera Potemkina, head of the department of environmental review (ER)	Dec 6
Summary Inventory of greenhouse gases is being carried out this year in Ukraine. Crimea is very rich by resources but needs investments, therefore USELF is potentially very interesting. First solar station was built 20 years ago, not very successful projects. Main negative environmental impacts of wind power, as identified in existing local studies (projects that went through the environmental review): birds, protected areas; coastal zones and rivers banks; noise, electric magnetic. The later is the responsibility of the public health authorities who also participate in project approval process. All ER conclusions are available on the Aarhus site of the Committee. OVOS (Local EIA), incl public hearings, is the responsibility of the developer. Siting is the main				

	problem of renewable in Crimea, since certain amount of land is in private use. There is a conflict in land use but it could be addressed. Not aware of any newly developed operating solar or wind facilities, no projects have recently gone through the Crimean ER. There were no projects on biomass/biogas in Crimea. Ecological network with its various level of protection is used as a basis for decision-making on siting the projects, incl projects on AES development. Main environmental concern of Crimea – domestic wastes. Although Crimea is a recreational territory, air emissions compare with industrial zones, but the mobile sources (vehicles) are the main reason for that. National OVOS system does not provide the tools for cumulative impacts assessment; such possibility exist, though, during the development of the master plans for cities and villages . In principle, all settlements shall have their master plans, but not all do.			
31.	Representative office of the President of Ukraine in the Autonomous Republic of Crimea	Central executive power	95000 Ukraine Crimea Simferopol Sovnarkomovskiy Lane, 3a. Tel +380-652-55-0114 Plakida Victor, acting permanent representative of the President of Ukraine to Crimea[1]	Dec 6
	Summary Crimea has mixed experience with EBRD, but the interest is high. It is important to understand that in order to develop AES, it is necessity to have stabilization capacities for the grid. Currently the offers of the wind farms developers exceeds Crimea demand 6 times, while reverse of the electric power is expensive and technically complicated. It is the state responsibility to finance grid reconstruction, and the state is working on it. There are indeed operating facilities of solar power plant not far from Simferopol (2 inventor units , 200 – 400 KWT, up to 800. Solar energy has more potential that wind since it is available during the peak demand (morning) wile wind usually is not. Complex usage of solar and wind energy is the most economically feasible option. Solar projects do not have negative environmental impacts, apart from the problem of cells utilization. There is an enterprise in Kirovograd who could accept such wastes; USELF shall discuss cooperation with them or make it conditional to the applicants to consider the wastes problem. There is commercially viable wind everywhere in Crimea, from Kerch to North-eastern part. But unique fauna, especially ornitofauna, is of concern. There are 15 private and semi-private firm are preparing the projects in wind development in Crimea; they realize how complex the situation is, and involve licensed ornithologists (locals and foreign). As for biomass, there is a plant producing briquettes for export (wood processing wastes). Straw is a potential source here. Regulatory framework is not encouraging biomass utilization since it does not ban burning the wood processing wastes. Geothermal potential – there are precedents but for heating mainly (greenhouses); some Swedish firm is looking to build a vapour-gaseous plant that will produce heat and electricity on the basis of geothermal sources in Sakskiy district. Information shall be disseminated aggressively; otherwise local stakeholders do not get it. It is advisable to have a workshop on the project, targeted on the recourses 'holders' – land owners, authorities, investors. It would help if there is an official letter informing the Crimea government on the project and requesting assistance in information dissemination.			

[1] Former head of the Council of Ministers of Crimea

32.	"Environment-People-Law" (EPL) (formerly Ecopravo-Lviv)	NGO	Ukraine Lviv Ivana Franka str. 9, 1a Lviv 79005. : P.B. # 316 79000 Lviv. Tel./Fax:+38 (032) 2257682 E-mail: epac (a) mail.lviv.ua Web-page: epl.org.ua Olena Kravchenko, Executive director Lena@uoregon.edu Volodymyr Adam Lawyer of the 1st category adam@uoregon.edu	Dec 6

Summary

For all projects funded and/or implemented with the involvement of international financing organizations (WB, EBRR), it is important to ensure that a bank institution closely monitors all project investment stages. There are problems with the development of small hydropower plants, which can be illustrated by an example of negative experience from Kremenchuk (Poltava Oblast) where electricity supply halted as a result of construction of 9 small hydropower plants around the town and progressive river silting-up. All environmental investments are recommended to be considered as the Category A projects, meaning that any non-compliance with environmental requirements would result in the withdrawal of funding. The very first step in any international investment project, including USELF, should be the analysis of areas where the Ukrainian legislation should be brought in consistency with the European legislation, and the review of the Ukrainian legal framework. Another negative example can be mentioned to illustrate how the WB funds were misused by a local Vodocanal (water utility): certain part of project funding was spent to replace pipework and refurbish office premises, whilst the major proportion of money was used to financed travels abroad. The Bank did not approve the report of expenditures and requested to return the money, and this resulted in increased water tariffs for customers. There was an opportunity to build and operate an incineration/cogeneration plant in Drohobych but the project did not go ahead because of difficulties with monitoring its implementation. The relocation of industrial capacity from the European countries with more stringent environmental requirements to other countries (including Ukraine) with a more lenient regulatory oversight has become an established and growing trend. In Ukraine, MAC limits (emission limit values) have not been established for some compounds generated in the process of household/industrial waste incineration, and no account of synergism is taken. The Carpathian Region is considered to have favourable conditions for the development of wind and solar power plants. There was a negative encounter with biomass in Lviv Oblast: the Nibulon Company tried to cultivate rapeseed but abandoned its fields under crop. This practice is very detrimental for the soil because it almost completely destroys humus layer. Biogas development potential exists in Lviv Oblast – one pilot borehole was established at a closed landfill in Hnezdychiv.

33.	Regional Sustainable Development Agency, Ivan Franko National University in Lviv	Regional NGO, Ministry of Science and Education of Ukraine, university	Doroshenko Street, Lviv, Ukraine Mob. 067-6702277, tel :0322394338 Volodymyr Shushniak, President, Ph.D. (Geography), Physical Geography Department	Dec 6

Summary Problems associated with the operation of small hydropower plants: existing plants are based on the technology used in the Alps, which is claimed by the interviewed to be unsuitable for the Carpathian Mountains. This claim was illustrated by an example of one small hydropower plant constructed in the Ilshen River near the Bilyn village in the Rakhiv District, which currently operates only at 30% of its design capacity. A water diversion pipeline (3 km) running along the river has impeded access to the river. It should be however noted that local residents are positive about this project. Positive public attitude also prevails in the Ivano-Frankivsk Oblast where Mr. Shushniak discussed this issue with local public. The following main problems can be encountered with the wind farms in the Carpathian Mountains: absence of persistent winds, high humidity causing blade icing in winter. As a result, wind farms are not likely to operate in an economically viable manner. At the same time, wind generators are in operation in Shevchenko (Ivano-Frankivsk Oblast). The wind energy potential is considered to be very low in the plain areas in Lviv Oblast where only one wind mill was constructed in the past but was in operation for a very short period of time. In the Zakarpattia Oblast, there are plans to restore small reservoirs in the rivers. Geothermal waters are present in Berehove in the Zakarpattia Oblast but they are not used for electricity generation and only little used for recreation. Mr. Shushniak is prepared to produce GIS maps and has the data base on the Carpathian wind pattern. He recommended to meet with Mr. Adamenko in Ivano-Frankivsk and with the mud flow management plant in Yaremcha.				
34.	Lviv City Council	Regional elected power	Lviv 79006, Ukraine Foreign Relations and Investments Division, Economic Policy Department 1, Rynok Square, Office 317, Tel.: 38(032)2546006; Fax: 38(032)2354085 Mob.: 38(050) 3130221 Serhiy Ivanovych Kiral, Head, Email: serhiy.kiral@city-adm.lviv.ua www.investinlviv.com Ivan Dmytrosevych (Economics Unit); Stepan Pokysh, Advisor to the City Mayor on Cooperation with EBRD	Dec 6
Summary Wind farms cannot work in Lviv because of lacking persistent winds. Existing farms in Skhidnytsia are only in operation in the windy periods. Small hydropower plants are also of little interest due to the absence of sufficient water resources. The solar power potential has not been examined, but there is one local company in Lviv that works in this area. Information about this company and researchers working in this area was promised to be provided later. It is recommended to meet with Yaroslav Hryhorovych Shpek, former Head of Lviv OblEnerho (Lviv Oblast Energy Utility).				
35.	Lviv Oblast State Administration	Regional executive power	Denys Anatoliyovych Shmyhal, Ph.D. (Economics), Head, Main Department of Economics Tel.: (032)261-21-55; Fax: (032)23560 80 Mob.:	Dec 6

			(067)314-03-03 Email: d.shmyhal@loda.gov.ua Roman Vasyliovych Kuzich, Deputy Head, Main Department of Economics; Head, Capital Construction and Energy Saving Economics Department, 18 Vinnychenko Street, Office 415, Lviv, Ukraine Tel.: (032)2999 368; Fax: (032)2612586 Mob. (067) 19 1248 1 Email: kuzych@i.ua www.UEKBE@Loda.gov.ua Volodymyr Vasyliovych Tsiapko, Head, Energy Saving Division	
Summary The wind energy potential exists in Lviv Oblast which has a 14 km mountain ridge where wind generators could be installed, but electricity lines will be required to connect then to the electricity grid. Similarly, there is a potential for hydropower capacity development. In the early 20th century, about 100 small hydropower plants were in operation in Lviv Oblast, and there are plans to reconstruct them. At this stage, the top priority is energy saving rather than alternative energy sources. The Scientific Council on Energy Saving Issues has been established in the system of the Oblast Administration. Energy saving programmes have been adopted for each customer category (the 2009-2012 Programme for Residential Customers, the 2010-2015 Programme for Budget Entities, and the 2010-2015 Programme for Housing and Municipal Utilities). This is the most attractive area with the shortest investment payback period. Solar batteries can only be attractive for private households. Cogeneration companies have proved successful, e.g. CJSC Energy-Novy Rosdil and the Energy Novoyarivsk RMC				
36.	Lviv Oblast Department of Environmental Protection	Regional environmental authorities	98 Striyska Street, 79026 Lviv, Tel./Fax: +38 032 238 73 70 http://www.dei.lviv.ua/ Olexandr Vasyliovych Moshura, Deputy Head, Lviv Oblast Department of Environmental Protection (mobile: 067 50 43284; office: + 38032 2387370) Alla Stanislavivna Voitsykhovska, Senior Environmental Inspector (mobile 067 8000896) alla.voytsyhovska@gmail.com	Dec 6

Summary

Alternative energy activities in Lviv Oblast were illustrated by the landfill methane collection and electricity generation project (145 boreholes); the plant capacity is reported to be sufficient for supplying electricity to 30,000 residential customers. But the main problem is how to transmit this electricity to the centralized electric grid. The plant is operated by the GAFSA Company (Director: Roman Sabat, mobile 097 356 63 26). In a phone conversation he informed that they completed the project's first phase that anticipated that the generated electricity would be used to meet the Company's demand. The second phase will involve the connection to the electricity grid, and all required approvals have been obtained (this relates to the Green Tariff). Another example of alternative energy developments relates to the Mykolaiv Cement Plant (Lviv Oblast) where spent car tires are used as an alternative fuel, and they also plan to use plastic bottles (while the Inspectorate does not consider this operation as non-compliant, a local NGO (EPL) is preparing a lawsuit against this Company and its waste incineration activity). Their view is that wind farms and small hydropower plants might be attractive but, on the other hand, electricity output is in excess of existing domestic demand. For example, the Burshtyn TPP exports its electricity. They also think that there is no sufficient information about the Green Tariff scheme, and know little about this arrangement. They suggested that the assessment of hydropower potential could have been carried out by the Lviv Oblast Water Management Department (contact person: Marina Tchaika, mobile 067 67 00 583). Some information about wind power potential might be available at the local Hydrometeorological Service (contact person: Ihor Fedik, mobile 050 -371-59 -72). The Lviv Region Natural Resources.

37.	Ukrainian National Forest Engineering University Institute of Environmental Economics	University	103 General Chuprynka Street, Room 51, Lviv 79057 Tel./Fax: (032) 297 03 88; E-mail: iee_nltu@ukr.net IEE Director: Liudmyla Ivanivna Maximova, Associate Professor, Liudmyla Dmytrivna Zahvoiska, Associate Professor, Oleh Tadeyevych Danchuk, Deputy Rector on Training/Research/Production Activities, Associate Professor, Ph.D. in Agro-Sciences Tel.: (032) 237 79-90; Mobile 067 4713330 Yaroslav Mykhailovych Hnatyshyn, Department of Production Process Automation, Electric and Thermal Engineering Ivan Herasymovych Voytovych, Prof., Wood Fabrication Technology Department, tel.:+380-32-238-45-04, home tel.: +380-32-221-28-24 E-mail: nlutov@txnet.com	Dec 7

Summary

The development of renewable energy capacity should start with pilot projects that can be used to train students and specialists, and this would trigger

	the development of RE businesses. The participant of the USAID Energy Efficient Cities Programme. In 2011, the Ministry of Education also plans to implement the energy saving and renewable energy programme. Significant potential for biogas production exists in the Lviv Oblast and entire Carpathian Region. It is recommended to meet with Ihor Pylypovych Slobodeniuk, Executive Director, Municipal Development Institute http://www.mdi.org.ua/44 (extensive experience and wealth of information on energy saving initiatives in the municipal sector)			
38.	Lviv State Agrarian University	University	Vitaly Mefodiyovych Boyarchuk, Deputy Rector, Head of Power Engineering Department Mobile: 050 3707101 http://www.lday.lviv.ua Tel.: (0322) 945-501; Fax: (0322) 946-919 292040 Dubliany, Zhovkva District, Lviv Oblast lday@mail.lviv.ua	Dec 7
	Summary The Green Tariff legislation is not going to work because little demand means little supply. Solar energy in Ukraine is 4 times more expensive than the traditional energy, and there are no environmental or economic incentives to promote this activity. At the same time, there are enthusiasts committed to renewable energy. There is a wind mill at the University, it works at low wind speeds and generates little noise. The average payback period for this equipment is at least 10 years, which is not attractive for businesses. Private households and small farms might be interested in solar power, and the University specialists have developed solar trackers and coating material for solar collectors. Small hydropower plants might be feasible in those locations where electricity demand is low, i.e. they are mainly intended to meet local demand. Biodiesel technologies appear to be quite promising, and a pilot project is underway where willow is used as a source of energy. Rapeseed is another suitable material, but there is no industrial capacity for rapeseed processing in Ukraine except for small farms the process rapeseed to produce biodiesel for their own needs. The meeting participants agreed that the development of renewable energy requires an integrated approach. For example, the combinations of solar energy and Stirling engine, solar batteries and wind generators, and solar batteries and geothermal heat pumps could be used. The development of small hydropower plants is impeded by uneven flow patterns (very high flows in spring and very low flows in summer). The problem of uneven inputs is inherent to all alternative energy sources. At the same time, there are problems with accumulating excess energy for later use. The cost of connection to the centralized electric grid is an issue, being mainly attributed to high cost of voltage conversion equipment. The meeting participants claim that the Green Tariff can only be used a year after it has been approved. The most interesting and attractive areas for the development of wind energy are the Crimea and vast steppes in the Eastern Ukraine (e.g. Luhansk Oblast) and a small area in the Carpathian Region. Large and medium businesses are not interested in this type of activity, which can only be attractive for small businesses and private households. It is very difficult to achieve stable voltage, which may vary between 50 to 1000 Volts depending upon wind speed. Efficiency is a big issue.			
39.	Lviv Polytechnic National University	University	Yevhen Vasyliovych Krikavsky, Head, Department of Marketing and Logistics, Dr. (Economics) 12 Stepan Bandera Street, Lviv 79013, Ukraine Secretary: +38032 258 26 25	Dec 7

			Tel./Fax: +38032 258 25 10 Email: ywkryk@polynet.lviv.ua Mobile: 067 67 22 554	
Summary With the oil price being about 150 USD per barrel, wind energy is becoming a viable option. Hydropower, whilst being clean, entails various risks and costs (land acquisition, permitting etc.). Solar energy is unlikely to be a viable option in the Lviv Oblast. All these options can be mainly seen as reserve energy sources. Wind energy has the potential in the Carpathian Region. Thermal power plants are currently profitable, and the margin is relatively high. To his view, the Ukrainian wholesale energy market works well. Cogeneration plants could be very useful in the Lviv Oblast where electricity outputs are in excess of actual demand. For example, the Burshtyn TPP generates electricity for export, with its several units being disconnected from the national grid and only generating electricity for export. The country has a huge space for energy saving improvement, and it is important to ensure that energy saving and renewable energy are considered in an integrated manner. The Lviv Oblast has significant potential for biogas production and use. Energy pricing is a big issue – it should be fair and transparent, and take account of all costs, while little or no account is currently taken of environmental costs. Existing energy pricing has a strong social dimension (with prices growing continuously for industrial customers and remaining unchanged for residential customers for many years). There is a disproportionate pricing regime for water supply and wastewater collection services, with the latter being 2 times cheaper than the former (the situation is different in other countries). Any tariffs should be understandable, fair and equitable. For businesses to become interested in alternative energy projects, they should have trust in the government, be confident that the rules remain stable at least for a year ahead, and be able to take risk. Small hydropower plants might be attractive for recreational businesses (eco-tourism).				
40.	Ministry of Environmental Protection of Ukraine	Executive power, state agency	Kyiv, Uritskogo str., 35 Tel. 044-206-31-10 Vadim Pojarskii – director of department for International cooperation and European Integration (067-4461210) Roman Shakhmatenko - leading expert of the department (044-2063111)	Dec 8
Summary General information: they are open for official cooperation through the letters with list of questions or request for precise information. Department is ready to share information and contacts but on official BV request only (e.g. faxed letterhead with signatures). They are waiting for a draft of our (BV and Ecoline) report. Perspectives. Ministry is responsible for permitting procedures and licensing projects on environmental issues. That's why preliminary discussing and strategic studies will be very helpful for USELF's participants. The SER results would be helpful				
41.	Passive House Institute EcoInform Publishing House	NGO, busienss	P.O. box 6649, 14/4 Saksaganskogo Street, 79005 Lviv, Ukraine tel. +38(032)260-21-89 mob.:+38 (067)673-46-44	Dec 8

			Oksana Denys, President. e-mail: ipb@ri.lviv.ua e-mail: OksanaDenys@ri.lviv.ua	

Summary

The most serious issue in Ukraine is corruption, and the renewable energy sector is not an exception. When asked about the Green Tariff and possibility for getting a connection to their electricity network, the representatives of Lviv OblEnergo (Lviv Oblast Energy Utility) say that they know nothing about this arrangement. At the same time, there is one company (UkrHydroEnergo Company) that operates on the basis of Green Tariff. The main barriers toward alternative energy development in Ukraine are summarized below:

Corruption, lack of information, inefficient use of funds provided by the international organizations, lack of interest and enthusiasm toward energy saving among the governmental officials, corrupted nature of the Green Tariff arrangement. The first step should be to train the trainers, students and designers. Only companies in which local authorities have interest will be able to use the Green Tariff arrangement (Yaroslav Shpek, President, Lviv Energy Sector Worker's Association). Energy is used in a very inefficient manner. If used wisely, the energy generated from alternative sources might be sufficient and no fuel combustion would be required. Manufacturing capacity for photovoltaic systems exists in Ukraine (the Quazar Company), but it has seen little or no development because the Company operates without any incentives/exemptions and is not able to predict how the situation will develop in the near future. Ukrainian taxes are difficult to comprehend, they are numerous, and taxation system is conducive to corruption. Forestry enterprises are not interested in collecting their waste, even despite the fact that there are companies willing to buy these materials and convert them into biomass. The Poltava Vodokanal (Water Utility) can be mentioned as a single positive example where the geothermal heat pump and solar batteries have been installed. At the same time, the combination of geothermal heat pumps and biogas installations is considered to be more appropriate considering the specifics of the utility. In Ukraine, alternative energy only relies on the enthusiasts. Available funds are used inappropriately – for example, the proceeds of the Lviv Environmental Fund have been used to finance the repair and replacement of pipework.

42.	Regional Capacity Building Initiative II (RCBI II)	EU project	Anatoliy Pavelko Country Specific Expert, Ukraine rcbi-east@rcbi.info mobile: +380676633672 website: http://www.rcbi.info	Dec 8

Summary

The Ukrainian party is interested in this type of projects. One of the major projects involves the construction of flood control dams in the Zakarpattia Oblast. The point of contact for this project is the Ivano-Frankivsk Oblast Water Management Department. This system of dams is planned to be synchronized with a similar system operated in Hungary. Small-scale energy projects mainly involved the use of biogas and wooden waste for heating. A cogeneration project is underway in Ivano-Frankivsk (bilateral cooperation between the City Council and the Slovak party). Foreign partners are interested in this type of projects. For example, the Hungarian representatives showed interest in using the geothermal waters for heating in Zakarpattia. There are biogas to electricity projects in Berehove (Zakarpattia Oblast) and Kalush (Ivano-Frankivsk Oblast).

VAT is a serious issue for EU funded projects – pursuant to the EU-Ukraine Agreement, Ukrainian beneficiaries of EU-funded projects are exempt from VAT on project-related works, goods and services, but local tax authorities often tend to disregard this provision. Two small hydropower plants have been constructed in the Carpathian National Park, impoundment-type and diversion-type**.** But both of them do not have fish passage systems, and inaccurate design estimates have resulted in riverbank erosion and continuous bank strengthening requirement. Both these plants have been connected

to the electric grid. A wind farm in Skhidnytsia was constructed in a location that is away from persistent wind directions; it currently operates on a pilot basis and is used by the Academy of Sciences of Ukraine. There is a governmental programme designed to support the development of small-scale hydropower plants. One small hydropower plant has been recently launched in the Sambir District to supply electricity to one settlement. There were plans to derive biogas from municipal waste in Ivano-Frankivsk. Rapeseed is used to produce biodiesel, but there is risk that alternative energy might be used as a disguise for conventional energy sold on the basis of the Green Tariff. One of examples of such disguised attempts relates the biogas production at the Lviv landfill where methane is extracted and incinerated, and this is presented as a 25-fold reduction in methane emissions. The Carpathian Region has the potential for hydropower and wind power development. Corruption is a serious problem, especially when it comes to getting a connection and using the Green Tariff. Individual farmers are not able to overcome this barrier. Forestry industry waste could be used to generate electricity, but small businesses have doubts that they will be granted access to these materials.

43.	Environmental Investigation Bureau	NGO	9/6 O. Basarab Street, Lviv 79017, Ukraine Tel.: +38(032) 220-11-40 bei.ukr@gmail.com http://beiukr.blogspot.com/Dmytro Valeriyovych Skrylnikov, Lawyer, Board Member e-mail: Dskrylnikov@mail.lviv.ua	Dec 8

Summary

The plant specialised in the energy crop cultivation, clean energy generation and organic fertilizer production is planned to be launched in December in Lypovka village (Ivano-Frankivsk Oblast), being a joint Ukrainian/Czech/German initiative. It is planned that the plant will generate 20 million kWh of electricity and produce 10 thousand tonnes of bioorganic fertilizers. The main problem associated with alternative energy projects relates to the fact that they are often located within the boundaries of protected areas and nature reserves. Mr. Skrylnikov has informed that the analysis of existing energy resources in the Lviv, Ivano-Frankivsk and Zakarpatiia Oblasts has been recently undertaken. http://euroregionkarpaty.com.ua/2010-03-21-01-23-17/120-q-q.html
http://euroregionkarpaty.com.ua/publications/aydyt_Dolyna.pdf
http://euroregionkarpaty.com.ua/publications/Aydyt_Velykobereznyy.pdf
http://euroregionkarpaty.com.ua/publications/audyt_Skole.pdf
http://euroregionkarpaty.com.ua/publications/aydyt_Drohobych.pdf
http://euroregionkarpaty.com.ua/publications/audyt_staryySambir.pdf
http://euroregionkarpaty.com.ua/publications/Dodatok_do_audyty.pdf

44.	Institute of Advanced Technologies		Alexandr Barladin, PhD, Director, +38 (044) 568-53-32, 02660, Ukraine, Kyiv,54, Popudrenka str., iat@antex.kiev.ua	Dec 8

The Institute of Advanced Technologies is a commercial organization that provides GIS services. They have produced maps and mapping products that serve many sectors, including street mapping, tourism, natural resources, etc.

45.	Fichner	Consultancy/USELF	Ralf Walther; Peter Pintz	Dec 8

Summary

Twenty-five project applications have been received.

- Four applications are new hydropower, 1-1.5 MW. This is a cascade project in the Carpathians. These will connect at 10 kV, distribution level.
- Two applications are wind power, including 12.5 MW project of five turbines 70 km west of L'viv and a 9 MW project in Crimea. These connect at 35 kV.
- Applications for solar include 6 MW in Odessa and 1-7 MW in Kyiv.
- Two applications are for landfill gas
- Biomass applications include three pellet production projects. These are a secondary priority, and funded under a corporate loan program. Pellets are for export, not generation, and the market is low. There are around seven biomass projects from farms using cow products, 1-3 MW due to limited availability of feedstock, which is typically an anaerobic digester. There are around 5 biomass projects using straw and other agricultural residues.

The application approach is as follows:

1. Questionnaire – does the project meet the EBRD's broad criteria (not illegal, a weapons manufacturer, etc., not liquid biofuel, for power generation). Applicant receives a response with eligibility and a request for answers to further project-specific questions.
2. General screening – is the project technically and financially viable. Questions are asked about the equipment used, financial viability, revenue source (Currently assuming all projects will be operating under green tariff), internal rate of return (must be above approx. 10% but there is no fixed number). Most applicants are looking for full funding. 30% equity is required, with 70% financing from EBRD.

Total cumulative impact is around 60 MW. Cumulative effects from other facilities are not considered.

All projects are near the grid. Grid operator will not expand due to lack of funding. The distribution grid is obligated to take power. Fichner suggests talking to Concord Power, a large wind developer near the Black Sea.

They have not gotten full information from anyone yet.

Regarding the cost of interconnection and whether it is recoverable at the oblast level – In practice, the regulator does not compensate for cost of interconnection. Smaller projects have lower interconnection costs.

Environmental questions involve checking for compliance with law including local requirements.

Fichner is preparing Concept Review Memo and Preliminary Screening Report, which can be obtained from Peter's office at EBRD. Fichner will review the Draft SER, and we propose to meet again in the Spring

46.	National Electricity Regulatory commission of Ukraine (NERC)	Other bodies of executive power	03680 Ukraine Kyiv Smolenska str 19 Tel +380444547007 Sergiy Dunaylo, commissioner Vasyliy Volomenyuk head of the department of generating enterprises Email: Dynaylo@nerc.gov.ua	Dec 9

Summary

	Commission is not involved into considering individual projects of generating electricity from AES. Function of the NERC is to regulate natural monopolies and developing the tariffs, incl tariffs for AES. Currently the tariffs are developed for each source of alternative energy. Commission could check the calculations for green tariff; technical expertise is responsibility of Energy and Fuel. NERC could estimate costs of connecting to the grid. NERC receives projects with full package of permit documentations. It could estimate the feasibility of individual projects; sources with the capacity more then 100 Kwt could be considered. Small projects (hydro, biogas) do not influence operation of the grid, while wind – with capacities higher than 600 Wt – could interfere. Green tariffs will start decreasing by 10% every 5 years since 2014. Developers who connect before 2014 will have maximum tariff till 2030. Possible problems of AES: land legislation is very complicated, so land allocation is problematic; this is especially important for hydro projects that involve flooding and hence land allocation. Order of green tariff application and approval is established by relative regulatory basis. However, there are no provisions that would allow monitoring fund allocation, so NERC initiates new legislation to monitor the green tariff funds. Working group on introducing changes to the Law on green tariff to include biogas is working now., but the privileges to submit the draft law belong to the Ministry. Future investor has to collect almost 90 signatures to get project approved; it might take year and a half. Government gave the task to decrease this time till 90 days. Neither NERC nor the Ministry considers small individual projects, but they still need to be approved by the Ministry of the Cabinet of Ministers. There is a single buyer – specialized public enterprise Energorynok who buys electricity using green tariff. To connect to the grid, the developer applies either to NERC or to oblast authorities, depending on the capacity. There used to be more then 2,000 small hydro plant in Ukraine 50 years ago with overall capacity of more than 1,000 Mwt. Now there are 100 of them. About 1,000could be restored, and it is possible to apply for green tariff on an already acting enterprise. Green tariff license could be obtained for the program of the hydro plants restoration; each of them shall not be bigger than 10 MWt but there is no need to license each facility separately. Oblenergo is responsible for connecting projects to the grids, and is compensated for this by the NERC. Investor could either pay himself and wait for compensation, or wait for Oblenergo to provide connection. There is no world practice to use green tariff for heat generation (In Austria there is green tariff on the facilities not on generation). It is possible to get green tariff for electricity co-generation. If the costs of connection are too high, the Ministry will not approve the project; although the Ministry could suggest to merge the facilities			
47.	National Power Company ‘Ukrenergo” EBRD	Other bodies of executive power	01032 Ukraine Kiev Kominterna str 25 tel +380 44 238 30 65 Oleksandr Netsora, Head of Prospective Development Department Oleksandr Luschik, deputy head Email: Netcora@nec.energy.gov.ua Olivier Tricca, principal engineer, EBRD Power&Energy Utilities Serhiy Masluycheko, EBRD Olga Yeremina, EBRD	Dec 10	
	Summary Two consultancy processes are taken place currently; one in focused on transmission lines, not necessarily alternative sources, second – USELF, incl SER. Ukrenergo has dispatching functions and function of transmission. Investor carries out all permitting process independently. Ukrenergo does not				

	influence permitting decisions. Input of wind energy is foreseen as 100 MWt, relatively small, so does not influence the grid. However, it is important to understand how the generation curve is functioning and influenced by AES. The most complicated stage of project development is site selection, this is investor's responsibility. It is almost impossible to predict or plan grid situation; connection is considered on the stage of the project when the feasibility study is ready; we use project-by-project approach. EBRD: there some negative examples when the companies obtain technical conditions and not implementing the project, how to deal with this? Almost impossible on Ukrenergo level, only on an oblast level. Ukrenergo cannot control the market, this is not its function. There should be centralized state policy dealing with this. Ukrenergo threshold – 220 Kv, sometimes lower. Ukrenergo cannot predict who is going to come tomorrow. It even could not include alternative energy sources into its planning, since they are considered as changes of consumer load. On the other hand, Ukrenergo cannot refuse any eligible applicant. Ukraine might not be able to provide regulation (compensation) capacities for full scale use of AES. Overall tasks on national level are extremely complex and differ from the regional ones. Volume of work is enormous if the task is to analyze and predict the whole system. It is necessary to establish the level of details that is necessary for SER; SER only seeks to understand what is the connection potential on national level Ukrenergo is ready to assist but need to understand their task clearer.			
48.	Ministry of Fuel and Energy of Ukraine	Executive power	0160 Ukraine Kyiv Kreschatik str 30 tel +380-95-4353544 Andrii Bukvych, diplomatic adviser to the Minister Email: bukvych@mintop.energy.gov.ua Vladislav Ramasanov, lead specialist, department on oil, gas, and oil processing industry 01601 ukraine Kyiv Kominterna str 27, of 617, Tel Vasyl Cheban, head of section, department of international cooperation and foreign projects, section of implementation of foreign investment projects. 01001 Ukraine Kyiv, Khmelnytsky str 6B, tel +380-44-586 3642 Email: VCheban@naftogaz.net Olena Lenskaya, head of the department of science and technical policy, National Agency of Energy Efficiency Tel +380-44-4564825	Dec 10

Summary of USELF SER Scoping Report Consultations with Stakeholders (2nd round of scoping consultations)

No.	Organisation	Type	Contact Details	Date
1	NAER (National Agency of Ukraine for Efficient Use of Energy Resources)	Governmental authority	E.A. Lenskaya, Head, Department of Research and Development Policy 12 Muzeiny Lane, 01601 Kyiv Tel.: (+38044) 590-59-60, 590-59-74 Tel./Fax: (+38044) 590-59-61, 590-59-75 http://naer.gov.ua/	5 April
Overall impression: a very competent job, no mistakes identified. **Recommendations and comments:** The Regulation on the State Energy Efficiency Agency has been recently approved to define our key objectives and goals. The structure of new agency is yet to be approved, and there is no information whether it is going to differ significantly from the NAER structure. The NAER has also provided to us the key legislative mechanisms designed to encourage the development of renewable energy sources.				
2	Lviv Oblast State Administration	Regional executive authority	Roman Vasyliovych Kuzich, Lviv Oblast State Administration, Deputy Head, Main Department of Economics; Head, Capital Construction and Energy Saving Economics Department 18 Vinnychenko Street, Office 415, Lviv, Ukraine Tel.: (032)2999 368; Fax: (032)2612586 Mob. (067) 19 1248 1 Email: kuzych@i.ua UEKBE@Loda.gov.ua	26 April
Overall impression: positive. **General remark:** on all accounts, it is impossible to discuss the use of alternative energy in the existing situation where traditional energy is used inefficiently. The interviewee also illustrates this statement by a practical example and emphasizes that measures aiming to reduce the energy intensity of country's economy are an overwhelming priority. It is noted that, while the USELF Programme is about electrical energy and the above remark is not applied to the SER, ecology is the main focus of environmentally sustainable energy. In this context, it is more important how much of energy we use and for what purposes, rather than speculating on the types of energy sources. **Recommendations and comments:** Sections 2 and 8: The SER scope and methodology as proposed are considered to be adequate and appropriate to achieve the objectives of a high-level Strategic Environmental Assessment. Section 3. Proposed RE scenarios and criteria are acceptable, but the main economic issue relates to the requirement to sell electricity through the centralised energy market, which significantly limits the opportunities for RE projects due to poor condition of distribution networks and high costs entailed in establishing new networks or improving the reliability of existing networks. This issue needs to be addressed in more detail as part of each scenario.				

As regards the eligibility criteria, these should be differentiated by RE source, type, area and capacity (in descending order).
Section 4. Proposed Stakeholder Engagement Plan appears to be adequate to meet the specified objectives and goals. The following stakeholders are also recommended to be engaged:
- Expert and Advisory Panel to the Main Department of Economics and Investments of the Lviv Oblast State Administration;
- Western Scientific Centre under the National Academy of Sciences of Ukraine;
- Energy Saving Centre within the Scientific/Technical and Economic Information Centre (STEIC).
Section 5: the total number of laws and regulations of relevance to issues discussed in the Report is over 4700. The codification of the energy-related legal framework is required as the basis for practical action.
Section 6. The description of baseline conditions should be expanded to provide linkage with existing socio-development programmes for areas under consideration.
Section 6. All key environmental issues are reflected.
Section 6. The description of environmental constraints and opportunities for renewable energy in the region is sufficient.
Sections 3 and 6. Problems relating to the use of proposed technologies are well known and typical. The issue of ensuring compliance with the commonly recognized environmental and social requirements becomes particularly urgent in the context of the European cooperation.
Section 8, Point 8.3.6. Mention should be made of regional programmes aiming to reduce emissions of pollutants and greenhouse gases. Though this is beyond the scope of the Report, this would provide a convincing argument that would help gain public support for real RE projects (for example, as part of activities described in Subsection 8.4)

3	The Environmental Systems Energy Service Company	Regional authorities; planning/implementing energy surveys	11 Mayakovsky Avenue, 69035 Zaporizhzhia, Ukraine, Tel. +38 061 224 68 12, Tel./Fax +38 061 224 66 86, e-mail: ecosys@zp.ukrtel.net http://www.ecosys.com.ua Director: Vasyly Stepanenko	22 April

Overall impression: Positive. The Company has worked in the energy efficiency sector of Ukraine for 20 years, doing what it could to protect the environment.

Recommendations and comments:

In Section 1 “SER Process of the Scoping Report), it is emphasized the need to align the national legislation with key EU Directives. As part of Stage B, it is recommended to develop a separate plan or programme of action to bring the national legislation of Ukraine in line with key EU Directives relating to energy efficiency of buildings and transport, energy efficiency and climate, and cogeneration. This would be an important step forward from a simple statement toward concrete action.

It is noted that this programme/plan will also provide clear targets and indicators for future recipients of project funding. There is an opinion that for the purposes of the SER process, the renewable energy of Ukraine should be described in a structured manner with energy consumers broken down into specific **consumer categories** because this is the area, where the major proportion of energy losses is concentrated, and the most significant environmental threats arise as a result of close dependence between the humans and environment. Buildings and transport should be considered as the utmost priority, as it is the case in Europe, for example. This relates to the Section 3 of the Report and proposed renewable energy scenarios. A

new EU Directive can be used as an example (***Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings*****).** It sets an ambitious goal to reduce annual demand for space heating to 15 kWh per square metre by 2020 for existing buildings. In essence, the EPBD Directive signifies the start of a new energy revolution with far-reaching implications, both environmental and energy-related: when the energy demand for space heating will be reduced to the specified level, hydrocarbon resources would no longer be needed for space heating and could be replaced with renewable energy resources. This approach to modernization of entire municipal service sector in line with the EU requirements would relieve the reliance of Ukraine on imported gas, meaning that the financial burden borne by the Ukrainian population as a result of high fuel costs would be also reduced considerably. In line with this principle, it is recommended to revisit the priorities identified in Sections 4 and 5, expand the list of Ukrainian stakeholders to be involved in the process, and shift a focus of legislative modernization toward key energy consuming sectors (including transport and buildings) where major energy- and climate-related threats emerge.

It is suggested to update Section 6 and include buildings and transport into the description of key environmental conditions and issues.

Those renewable energy projects that use RE sources located at significant distances from energy consumers are considered to be less relevant and urgent than projects involving the use of RE sources that can be located in the immediate proximity of consumers (e.g. within a building) – this is our main point and recommendation for the SER process.

4	Lviv Oblast State Environmental Protection Department	Governmental authority	Alla Stanislavivna Voitsykhovska, Senior Environmental Inspector http://www.ekology.lviv.ua/	23 April

Comment: The existing Green Tariff system needs to be enhanced, because it currently represents the main obstacle to the extent that the use of alternative energy sources is economically unviable.

5	MKD Consulting Ltd.	Consultancy	Mikhail Prazian, Director General 38 Predslavinska Street, Office 121, 03150 Kyiv, Ukraine +38 (044) 529 8921 ok@mkd.kiev.ua	22 April

Overall impression: The Scoping Report has been prepared at a high professional level and provides a comprehensive analysis of social and environmental issues faced by Ukraine.

Recommendations and comments:

We think that the Report could be further enhanced if a special Subsection 4.4 was added to the Section 4 to focus on the engagement/interaction arrangements that could be used for business/entrepreneurial structures within the framework of USELF.

From November-December 2010 and onwards, the MKD Consulting has been looking for a potential developer/borrower, and we are able to share some experience. Initially, MKD Consulting selected project proposals prepared by 4 developer companies and that met the USELF criteria. However, none of the projects was considered worth submitting to the USELF for various reasons described below:

- A wind energy project developer intended to use wind power units of their own manufacture to produce electrical energy. The results

of financial modelling demonstrated that the profitability of the project was insufficient due to low design capacity of proposed units.

- A small hydropower project was proposed by administrative officials that were not able to assume any responsibility for at least part of project risks, and there were no business entities to finance/co-finance the project.
- A solar energy project developer (photovoltaic modules installed/operated at an agro-industrial enterprise), a strong leading company in Ukraine, was not eligible due to the fact that the rooftop installations are not eligible for funding under the USELF.

Some general ideas regarding the proposed Subsection 4.4: A representative of a major Ukrainian oligarchic business group or an affiliate company run by such group appears to be **an ideal hypothetical borrower** under the USELF Programme.

As regards **medium businesses**, it is very appropriate that EBRD tries to support medium-size companies through synergies between the USELF and TAM/BAS Programmes.

Small businesses appear to have little or no chances to borrow under the USELF**.** Apart from obvious financial reasons, a small business is too weak to ensure the sustainability of its projects in the existing political and administrative environment.

The most effective way forward for **real developers** so that the will be able to compete for funding for their renewable energy projects in Ukraine is to **try and associate themselves with the international leaders** (or players representing top 10-20 companies) from the very outset. These companies should be prepared to use various arrangements in order to build their business in Ukraine (i.e. equipment leasing, in-kind loans, equity financing etc.). It would therefore be very useful to organize, as part of the USELF activities, **presentations or other similar events** with the involvement of best European and international companies that are present in Ukraine or have plans/interest to do business in Ukraine in the nearest 3-5 years.

Remark. Problems may be encountered in the course of project implementation with regard to tender procedures for all goods and services offered by these leading companies; this issue needs to be further examined.

Specific comments to the Sections of the Scoping Report:

Section 4: it is suggested to expand the list of stakeholders by including engineering companies engaged in alternative energy activities.

Section 5: it is suggested to add information on small hydropower plants (used to be called ‘water mills’ till 1939), which were in operation on the small rivers in the Western Ukraine (Styr, Zakhidny (Western) Buh, Horyn, Seret, Ikva etc.). It is assumed that relevant information is available in the public archives/records offices in Cracow and Vienna.

Section 6: it is worth to emphasise that the problem with recycling/managing acid sludge accumulated in the Lviv Oblast (Olvit Petroleum Plant, Halychina Petroleum Processing Plant) has remained unaddressed for over 10 years. This material is a new source of alternative energy.

The recycling/recovery of spent oils (motor oils, hydraulic oils etc.) is also an issue. An example of a successful recycling option is described at www.rnjsa.com.pl

The Company specialists also think that bio-ethanol production projects in Ukraine also deserve attention.

6	Scientific Engineering Centre "Biomass" Ltd. (SECB)	Consultancy	Ukraine, 03067, Kiev, postal box 66 Phone: +38 044 332-9140	29 April

			Dr Georgiy Geletukha, Director Mobile: +38 050 358 2454, email: geletukha@biomass.kiev.ua	
Overall impression: Declined to comment due to high volume of the document				
7	National Institute for Strategic Studies	Research center	Vyacheslav Georgiyovych Potapenko, Ph.D. in Geography, Senior Researcher, Chief Advisor +38067 408 1454 potapenko@ukr.net	9 April
Overall impression: The Report has been prepared at a high professional level and reflects the results of scrupulous and comprehensive work with a large number of documents and various experts. It provides a comprehensive analysis of existing legal and governance framework. When discussing economic aspects, it would be appropriate to discuss existing corrupt practices in the permitting/licensing process that have significant implication on the project and its cost. Generally speaking, a renewable energy lending programme is very much needed for Ukraine, especially in the context of growing concerns over the safety of nuclear energy, exacerbated by the Fukushima 1 accident and the 25th anniversary of the Chernobyl Disaster. Renewable energy should become the main source of energy supply to rural/agricultural areas and densely populated areas. **Comments and recommendations:** The availability of technical assets and equipment (wind generators, solar batteries etc.) is a prerequisite to ensuring the development of renewable energy; it would be therefore appropriate to carry out the comparative analysis of equipment offered by domestic and leading international manufacturers. While the analysis of renewable energy resources, carried out at the national level and using small scale maps, is very useful and appropriate, an important feature of renewable energy resources is that they have a highly localized distribution. The analysis would be more specific if it involved the review of local-scale information on some key areas, especially those that are considered to have good potential for wind and small hydro power. It would be also appropriate to examine specific landscape characteristics, meso-topography, micro-climatic pattern (with detailed description of specific parameters), local hydrogeology and flow pattern.				
8	National Forest Engineering University Institute of Environmental Economics	University	103 General Chuprynka Street, Room 51, Lviv 79057 Tel./Fax: (032) 297 03 88; E-mail: iee_nltu@ukr.net Liudmyla Dmytrivna Zahvoiska, Associate Professor, zahvoyska@ukr.net	26 April
Overall impression: positive, the Report and analysis presented therein are very appropriate. **Recommendations and comments:** Five renewable energy options: it appears that the Report considers 5 sources rather than utilization options for renewable energy. Potential				

utilisation options include sales of energy on the basis of the Green Tariff or use of energy for someone's own needs. The use of the Green Tariff entails many problems: even if you have the right to use it, practical implementation is very difficult. However, It is possible to use electrical energy and heat for your own needs and correctly calculate costs saved/avoided through the use of clean energy instead of energy derived from fossil fuels. The issue of economic efficiency is mentioned in the Report on several occasions. Indeed, what is meant here is economic – not financial(!!!) – efficiency. However, what we usually do is we do speak about economic costs but calculate financial costs. In the international practice, economic analysis (cost-benefit analysis, or CBA) is considered as a separate exercise that differs from financial analysis. The CBA is indispensable for energy projects. Furthermore, it is worth to mention that, for example, biogas projects typically have other revenue sources in addition to sales of electricity and heat (e.g. fertilizers, acids). But what is most important is to avoid costs and losses that would be entailed with the "no project" scenario. We have just published an article where the economic efficiency of biogas recovery/recycling at the WWTP in Lviv is considered. It should be noted that the results of financial analysis considerably differ from those of CBA. While RE projects are very beneficial to the community and society, they typically have longer pay-back periods for investors. Therefore, state support and understanding is crucial. I think that the word "ecological" does not fit the context of the Report. The term 'environmental' relates to the totality of surrounding conditions, and use of word borrowed from the Russian language by word-for-word translation is inappropriate. The Report does not consider bio(geo)coenoses, biotopes, ecosystems, interactions among plant and animal species, or other processes/phenomena that fall within the scope of ecology as a science. The Report only deals with environmental impacts.				
9	Lviv Polytechnic Institute	University	Eugeny Vasilievich Krikavsky, Chair, Department of Marketing and Logistics 12 Stepan Bandera Street, 79013 Lviv, Ukraine http://lp.edu.ua/	20 April
This person is not in the list of interviewees provided in the Report though he was involved in the first round of consultations.				
10	Taras Shevchenko National University of Kyiv	University	Ukraine Kyiv Glushkova avenue, 2, r. 417 Department of socio-economic geography Faculty of Geography, National Shevchenko University, , Mezentzeva Natalia, associate professor Mob. 050-858-41-73 , provotarnat@ukr.net	25 April
Overall impression: I have received and read the SER Scoping Report, which describes various aspects of renewable energy in a sufficiently complete and adequate manner. There are no significant comments and remarks. **Recommendations and comments:** On its page 58 (Section 6.6. Community and Socio-Economics), the Report focuses on AIDS. Why? In Ukraine, high mortality rates due to cardiovascular disease, cancer and respiratory diseases are the main problem				
11	Teplo Plus Tekhnika Ltd.	Developer	9, Geroiv Avenue, 49100 Dnipropetrovsk, Ukraine	21 April

		(Company specialised in the manufacture and sales of steam boilers for space heating that fire solid fuels (buckwheat husk, wood shavings and sawdust).	+38(097) 728-25-79 http://par.dp.ua info@par.dp.ua General Director: Stanislav Oleksiyovych Bilohurov	
Overall impression: The Report is a high quality document. At the present time, the Company is not interested in this type of projects				
12	VEMA Carbon	Developers - biogas/biomass	Sergiy Apostolaka Deputy Technical Director 9A, Zasiadko Avenue, 83054 Donetsk, Ukraine Mobile: +380 50 4735567 skype: apostos42	20 April
Overall impression: The Report is a well prepared and high quality document. It is obvious that the preparation of this document has involved a considerable amount of serious and scrupulous work. **Recommendations and comments:** None				
13	AgroIndustry Ltd.	Equipment manufacturer	A major manufacturer of wind generators in Ukraine. General Director: Alexander Vladimirovich Fedorov http://www.vetryak.com.ua/ Dnipropetrovsk, Ukraine, Contact telephone numbers: +38 067 5126580 +38 067 5128430	23 April
Comment: It is very difficult to receive a license to use the Green Tariff; licensing procedure is extremely cumbersome and bureaucratized. We had an encounter with EBRD two years ago when we wanted to receive a small loan (350,000 – 400,000 Euro) to implement a project involving the use of alternative energy sources, but found out that a minimum loan amount is 500,000 Euro. If this limit is not applied under the USELF, this opens up new opportunities for cooperation with the Bank.				
14	UkrHydroEnergo	Professional association	Ukraine 04112 Kyiv, Tankova str, 8, of.15. tel 380 44-4560024, web: www.ukrhydroenergo.org Karamushka Oleksandr, executive director, email: postmaster@ukrhydroenergo.org	28 April
Overall impression: The Report is of good quality and sufficiently comprehensive.				

Recommendations and comments: The Report presents/contains a non sufficient (poor) data for small hydro. The full review will be send on the 5th of May				
15	Ukrainian Wind Energy Association	Association / National NGO	Andrei Eugenievich Konechenkov 68 Saksaganskogo Street, Office 1, 01033 Kyiv, Ukraine +38 (044) 223 2996 / +38 (044) 289 2616 uwea@uwea.com.ua	26 April
Overall impression: The Report is sufficiently comprehensive and useful for specialists in the area of renewable energy; information contained therein is interesting and useful. As a general recommendation, the volume of the report could be reduced for easier comprehension. **Recommendations and comments:** The Report mentions the Construction Standard DBN A.2.2-1-2003, which was amended in 2010 (*Amendment No. 1 to DBN A.2.2-1-2003* "The Scope and Composition of Environmental Impact Assessment (OVNS) Documentation Prepared as Part of the Design and Construction of Industrial Facilities, Buildings and Structures", intended to replace the DBN A.2.2-1-2003* on risk assessment). In the Report, the areas considered to have good potential for wind energy are described using 'wind density' (W/m2), whereas wind velocity is a more commonly used characteristics. For the convenience of readers, it is suggested to provide information on a relevant conversion coefficient. On its page 9, the Report mentions that the first biogas installation (165 kW) was commissioned in 2009. This information is somewhat incorrect. The first biogas project was implemented in 2005 in the Elenivka Village (Mahdalinivka District, Dnipropetrovsk Oblast). The Biomass Company acted as a Consultant for that project, which was described in the article published in the *Zelenaya Energetika* (Green Energy) Journal. List of Abbreviations: NAER is a traditional abbreviation for the National Agency of Ukraine for Efficient Use of Energy Resources.				
16	National Ecological Centre of Ukraine	NGO	Elena Miskun 1, S. Petlyura Street, 01032 Kyiv Tel.: 044 353 78 42, Fax: 044 289 56 36 www.necu.org.ua www.bankwatch.org miskun@bankwatch.org	26 April
Overall impression: The Report appears to be quite comprehensive and takes account of all remarks expressed during consultations. It is worth to emphasise the importance of the fact that the Report highlights that Ukraine does not have any deficit in electrical power, while there is a deficit in heat availability. **Recommendations and comments:** Though it might be outside the scope of the Report, it would be a good idea to provide a list of mitigation options somewhere within the text of this document.				
17	Mama-86	NGO	Ukraine 03057 Kyiv, 4 Yangel Academiscain st, of 126, web: www.mama-86.org.ua	28 April

			Anna Golubovska-Onisimova, president, email: anna@mama-86.org.ua	

Overall impression: The Report is of good quality and sufficiently comprehensive.

Recommendations and remarks:

(d) National Social and Public Laws Applicable to the Project

The Subsection on Public Consultation and Disclosure (page 29) does not mention the Law on Access to Public Records of 13.01.2011 No. 939-VI – this is a very recent and important piece of legislation which should be included in the review.

The subsection e) Other Relevant National Strategies and Plans (page 30) does not discuss the National Environmental Policy and Strategy (this Law was passed by the Verkhovna Rada of Ukraine in December 2010). Some of its provisions are of direct relevance to the renewable energy development and SEA process. It might be useful to include this document in the summary provided in the Annex C.

Comments on Annexes: the reference to the Society of Geo-ecologists as a youth NGO looks somewhat doubtful though everything is possible (?)

A LIST OF STAKEHOLDERS CONTACTED DURING USELF SER SCOPING STAGE CONSULTATIONS

STAKEHOLDERS MAILING LIST			
No.	**Institution/Organization**	**Type**	**Contact info**
LEGISLATIVE AND EXECUTIVE POWER			
1.	Verkhovna Rada (Parliament) of Ukraine, Committee on the issues of fuel and energy complex, nuclear policy and nuclear safety	High level authority – legislative power	Ukraine 01008 Kyiv Grushevskogo str 5, Tel +380-44-2552575 Belyaev Yuri, adviser, deputy head
2.	Ministry of Agricultural Policy and Food of Ukraine – Department of Engineering & Technical Support	Executive power	01001, Kyiv, 24, Khreschatyk street. Tel: +380 44 226 30 62 Mykola Datsenko Email: datsenkom@ukr.net
3.	Ministry of Economic Development and Trade of the Autonomous Republic of Crimea, Department of investment policy and foreign economic activities,	Executive power	99095 Ukraine Crimea Kirova av, 13 tel +380652 544290 Okgrugin Michael, leading specialist. Email: crimea.investment@gmail.com
4.	Ministry of Fuel and Energy of the Autonomous Republic of Crimea	Executive power	99095 Ukraine Crimea Kirova av, 13, of. 363 tel +380652 544281 Zhdanov Vadim, deputy minister
5.	Ministry of Ecology and Natural Resources of Ukraine	Executive power	Kyiv, Uritskogo str., 35 Tel. 044-206-31-10 Vadim Pojarskii – director of department for International cooperation and European Integration (067-4461210) Roman Shakhmatenko - leading expert of the department (044-2063111)
6.	Ministry of Fuel and Energy of Ukraine	Executive power	0160 Ukraine Kyiv Kreschatik str 30 tel +380-95-4353544 Andrii Bukvych, diplomatic adviser to the Minister Email: bukvych@mintop.energy.gov.ua Vladislav Ramasanov, lead specialist, department on oil, gas, and

			oil processing industry 01601 Ukraine Kyiv Kominterna str 27, of 617, Tel Vasyl Cheban, head of section, department of international cooperation and foreign projects, section of implementation of foreign investment projects. 01001 Ukraine Kyiv, Khmelnytsky str 6B, tel +380-44-586 3642 Email: VCheban@naftogaz.net Olena Lenskaya, head of the department of science and technical policy, National Agency of Energy Efficiency Tel +380-44-4564825
7.	National Electricity Regulatory commission of Ukraine (NERC)	Other bodies of executive power	03680 Ukraine Kyiv Smolenska str 19 Tel +380444547007 Sergiy Dunaylo, commissioner Vasyliy Volomenyuk head of the department of generating enterprises Email: Dynaylo@nerc.gov.ua
8.	National Power Company 'Ukrenergo" EBRD	Other bodies of executive power	01032 Ukraine Kiev Kominterna str 25 tel +380 44 238 30 65 Oleksandr Netsora, Head of Prospective Development Department Oleksandr Luschik, deputy head Email: Netcora@nec.energy.gov.ua Olivier Tricca, principal engineer, EBRD Power&Energy Utilities Serhiy Masluycheko, EBRD Olga Yeremina, EBRD
REGIONAL AUTHORITIES			
9	**Autonomous Republic of Crimea**		
9.11	Ministry of Economic Development and Trade of the Autonomous Republic of Crimea; Agency for Regional Development	Executive power of Autonomous Republic of Crimea	95005 Ukraine Crimea Simferopol, Kirova str, 13 Tel +380-0654-544271 Radin Yaroslav, deputy minister Email: yarad@ukr.net Kasyanov Pavel, Head of investment formation department, email: me@ukr.gov.ua – incorrect address Starodubov Alexey, director. Tel +38050-422-3180, email: avs_arr@ukr.net

9.2	Republican Committee on environmental protection of the Autonomous Republic of Crimea	Regional environmental authority	95022 Ukraine Crimea Simferopol Kichkimetskaya str 198, of. 101 tel. +380-652-6165773 Aleksandr Lesov deputy head, responsible for Kyoto issues Vera Potemkina, head of the department of environmental review (ER)
9.3	Representative office of the President of Ukraine in the Autonomous Republic of Crimea	Central executive power	95000 Ukraine Crimea Simferopol Sovnarkomovskiy Lane, 3a. Tel +380-652-55-0114 Plakida Victor, acting permanent representative of the President of Ukraine to Crimea2
10	**Cherkasy Oblast**		
10.1	Head of Cherkasy Oblast State Administration	Cherkasy Oblast State Administration	Serhiy Borysovych Tulub 18000 Cherkasy, Shevchenka Boulevard 185 e-mail: cancelar@oda.ck.ua Tel. (reception desk): 37-29-15
10.2	Main Department of Economics	Cherkasy Oblast State Administration	Anatoly Oleksandrovych Kostenko 18000 Cherkasy, Shevchenka Boulevard 185, tel./fax: (0472)37-35-45, tel. 37-34-14, E-mail: ecoadm@uch.net
10.3	Main Department of Investment and Innovation Policy, Entrepreneurship and External Relations	Cherkasy Oblast State Administration	Euhen Volodymyrovych Kalinichev, First Deputy Head 118000 Cherkasy, Shevchenka Boulevard 185 Tel./Fax: 37-42-60. e-mail: uzez_oda@ukr.net
11	**Chernivtsi Oblast**		
11.1	Head of Chernivtsi Oblast State Administration	Chernivtsi Oblast State Administration	Mykhailo Mykolayovych Papiyev Tel.: (0372) 55-15-89; (0372) 51-30-10 58010 Chernivtsi, Hrushevskogo Street 1 Fax: (0372) 55-37-76 e-mail: oda@leon.bucoda.cv.ua
11.2	Main Department of Economics	Chernivtsi Oblast State Administration	Head: Ihor Anatoliyovych Sidlyar, tel.: 55-32-01, 55-32-53

[2] Former head of the Council of Ministers of Crimea

			58010 Chernivtsi, Hrushevskogo Street 1
11.3	Department of Energy, Transport, Communication and Public Road Infrastructure	Chernivtsi Oblast State Administration	Head: Yaroslav Antonovych Kobelia, Tel.:/fax: 57-54-25, 55-29-07, 54-34-08, 58010 Chernivtsi, Hrushevskogo Street 1 e-mail: rozvitok@oda.cv.ua
12	**Dnipropetrovsk Oblast**		
12.1	Head of Dnipropetrovsk Oblast State Administration	Dnipropetrovsk Oblast State Administration	Oleksandr Yuriyovych Vilkul 1 Kirova Street, Dnipropetrovsk 49004 Tel.(056)742-89-80, 742-88-59, Fax: (056)742-83-84, 770-31-22 http://www.adm.dp.gov.ua e-mail: info@adm.dp.ua
12.2	Main Department of Economics	Dnipropetrovsk Oblast State Administration	1 Kirova Street, Dnipropetrovsk 49004 econom@depecon.dp.ua Acting Deputy Head: Oleksandr Mykolayovych Falchiyan
12.3	Fuel and Energy Complex Department	Dnipropetrovsk Oblast State Administration	1 Kirova Street, Dnipropetrovsk 49004 energy@adm.dp.ua Head of Department: Eduard Oleksiyovych Kirpichov Tel.: 742-80-71 Fax: 742-89-82
13	**Donetsk Oblast**		
13.1	Donetsk Oblast State Administration	Local Authorities	Yulia Chikunova, Dpt. for Industry & Infrastructure Development, Head of division 34 Pushkina Boulevard, 83105 , Donetsk, Ukraine +38 (062) 307 6229/ +38 (095) 811 1977 julia.chikunova@mail.ru
14	**Ivano-Frankivsk Oblast**		
14.1	Head of Ivano-Frankivsk Oblast State Administration	Ivano-Frankivsk Oblast State	Mykhailo Vasyliovych Vyshyvaniuk 21 Hrushevskogo Street

		Administration	76004 Ivano-Frankivsk Ukraine Tel.: (0342) 55-20-07 Fax: 55-21-86 e-mail: oda@if.gov.ua www: www.if.gov.ua
14.2	Main Department of Economics	Ivano-Frankivsk Oblast State Administration	76004 Ivano-Frankivsk, Hrushevskogo Street, 21 Head: Oleh Volodymyrovych Tkach 78-41-30 / 55-26-10 (fax)
14.3	Main Department for Industry and Infrastructure Development	Ivano-Frankivsk Oblast State Administration	76004 Ivano-Frankivsk, Hrushevskogo Street, 21 Head: Pavlo Iosypovych Avramchenko 55-21-54 / 55-20-58 (fax) Department for Fuel and Energy Complex, and Efficient Use of Energy and Mineral Resources (Head: Vadym Ivanovych Kozlenko) Tel.: 75-80-95 3-65
15	**Kherson Oblast**		
15.1	Head of Kherson Oblast State Administration	Kherson Oblast State Administration	Mykola Mykhailovych Kostiak Tel: (0552) 32-11-00 E-mail: vd-komp@oda.kherson.ua Fax: (0552) 26-36-02 1 Svobody Square, Kherson, 73000
15.2	Main Department of Economics	Kherson Oblast State Administration	47 Ushakova Avenue, Tel. 22-44-25, Fax: 49-81-25 E-mail: up-ekon@oda.kherson.ua
15.3	Fuel and Energy Complex Unit	Kherson Oblast State Administration	Head: Ivan Vasyliovych Chorny 73000 Kherson, Ushakova Street 47, Tel. 22-54-49 E-mail: up-energ@oda.kherson.ua
16	**Kirovohrad Oblast**		
16.1	Head of Kirovohrad Oblast State Administration	Kirovohrad Oblast State Administration	Serhiy Mykolayovych Larin, Kirovohrad, Kirova Square 1, tel.: 0522353611, public@kr-admin.gov.ua
16.2	Main Department for Industry and Infrastructure Development	Kirovohrad Oblast State Administration	Yuri Viktorovych Volsky 25022 Kirovohrad, Kirova Square 1, Council House

			E-mail: upets_koda@kw.ukrtel.net Web: http://upets.kw.ukrtel.net Tel.: 24-08-55, tel./fax: 24-03-91
16.3	Main Department of Economics	Kirovohrad Oblast State Administration	25022 Kirovohrad, Kirova Square 1 Svitlana Vasylivna Lobanova tel. 24-18-54, fax: 24-32-64 e-mail: gu-ekonom@kw.ukrtec.net
17	**Kyiv Oblast**		
17.1	Main Department of Municipal and Housing Infrastructure and Fuel/Energy Complex	Kyiv Oblast State Administration	Head: Halyna Mykolaivna Kulinich 01001 Kyiv, Khreschatyk Street 6 Fax: 278-14-67 E-mail: info@ogku.com.ua
18	**Luhansk Oblast**		
18.1	Main Department of Economics	Luhansk Oblast State Administration	Tel.: (0642) 53-80-08 Postal address: 91016 Luhansk, Heroiv Velykoi Vitchiznianoi Viyny Square, 3a economy@loga.gov.ua
18.2	Main Department for Industry and Infrastructure Development	Luhansk Oblast State Administration	Tel.: (0642) 58-59-67. Fax: 53-81-83 Postal address: 91016 Luhansk, Heroiv Velykoi Vitchiznianoi Viyny Square, 3 Email: gupp@loga.gov.ua
19	**Lviv Oblast**		
19.1	Main Department of Economics	Lviv Oblast State Administration	79008 Lviv, Vinnychenka Street, 18 Tel. (032) 261 21 55, Fax: 297 16 80 e-mail: Gue@loda.gov.ua
19.2	Coal Industry and Fuel/Energy Sector Department	Lviv Oblast State Administration	79008 Lviv, Vinnychenka Street, 18 Tel. (032) 299 92 26, Fax: 261 21 77 e-mail: energy@loda.gov.ua
19.3	Lviv City Council	Regional elected power	Lviv 79006, Ukraine Foreign Relations and Investments Division, Economic Policy Department 1, Rynok Square, Office 317, Tel.: 38(032)2546006; Fax: 38(032)2354085 Mob.: 38(050)

			3130221 Serhiy Ivanovych Kiral, Head, Email: serhiy.kiral@city-adm.lviv.ua www.investinlviv.com Ivan Dmytrosevych (Economics Unit); Stepan Pokysh, Advisor to the City Mayor on Cooperation with EBRD
19.4	Lviv Oblast State Administration	Regional executive power	Denys Anatoliyovych Shmyhal, Ph.D. (Economics), Head, Main Department of Economics Tel.: (032)261-21-55; Fax: (032)23560 80 Mob.: (067)314-03-03 Email: d.shmyhal@loda.gov.ua Roman Vasyliovych Kuzich, Deputy Head, Main Department of Economics; Head, Capital Construction and Energy Saving Economics Department, 18 Vinnychenko Street, Office 415, Lviv, Ukraine Tel.: (032)2999 368; Fax: (032)2612586 Mob. (067) 19 1248 1 Email: kuzych@i.ua www.UEKBE@Loda.gov.ua Volodymyr Vasyliovych Tsiapko, Head, Energy Saving Division
19.5	Lviv Oblast Department of Environmental Protection	Regional environmental authorities	98 Striyska Street, 79026 Lviv, Tel./Fax: +38 032 238 73 70 http://www.dei.lviv.ua/ Olexandr Vasyliovych Moshura, Deputy Head, Lviv Oblast Department of Environmental Protection (mobile: 067 50 43284; office: + 38032 2387370) Alla Stanislavivna Voitsykhovska, Senior Environmental Inspector (mobile 067 8000896) alla.voytsyhovska@gmail.com
20	**Odesa Oblast**		
20.1	Main Department for Infrastructure Development and Energy Supply	Odesa Oblast State Administration	65107 Odesa, Kanatna Street 83 Tel./fax: 7285596 e-mail: guri@odessa.gov.ua Head: Oleh Mykhailovych Kurakov Head of Energy Supply Department: Serhiy Stanislavovych Paseka; mobile: 7036224

			guri@odessa.gov.ua
20.2	Main Department of Economics	Odesa Oblast State Administration	65032 Odesa, Shevchenka Avenue 4 Tel.: 7189-527 e-mail: eko@odessa.gov.ua Head: Oleh Mykhailovych Muratov
20.3	Department for Investments and Innovative Development / Investment Mobilisation and Project Monitoring Division	Odesa Oblast State Administration	Head of Division: Iryna Ivanivna Teleshman 718-93-72
20.4	Teplodar Town Mayor	Local Authorities	Leonid Pecherskiy, Mayor, Teplodar Town 65490 Odesa Oblast, Teplodar, Pionerna Street, 7 teplodar-city@mail.ru
20.5	Odessa Oblast, Yuzhny Town Council	Local Authorities	Vadim Drumov, Head of External Relations & Investments Dpt. +38 (048) 42 302 42 / +38 (093) 600 9878 cezar@ukr.net
21	Ternopil Oblast		
21.1	Foreign Relations, Economic Cooperation and Investment Department	Ternopil Oblast State Administration	8 Hrushevskogo Street, 46021 Ternopil Tel.: (0352) 253864, 522411, 52 08 65; tel./fax: (0352) 522632 E-mail: office@ftrade.gov.te.ua
21.2	Main Department of Economics	Ternopil Oblast State Administration	8 Hrushevskogo Street, 46021 Ternopil, Tel./fax: (0352) 52-33-83 e-mail: admin@economy.gov.te.ua http://www.gue.te.gov.ua
22	**Mykolaiv Oblast**		
22.1	Main Department of Economics	Mykolaiv Oblast State Administration	http://www.economy-mk.gov.ua/ 54009 Ukraine, Mykolaiv, Admiralska Street 22 Tel. +38 (0512) 37-09-32 Fax: +38 (0512) 37-09-32 E-mail: econom@mykolayiv-oda.gov.ua
22.2	Department for Foreign Relations, Economic Cooperation, European	Mykolaiv Oblast State Administration	54009 Ukraine, Mykolaiv, Admiralska Street 22

	Integration, Tourism and Resorts		Tel. 8-0512-37 22 63; Fax: 37 23 59, uzed@mykolayiv-oda.gov.ua Head: Tetiana Oleksandrivna Chichkalyuk
23	**Volyn Oblast**		
23.1	Main Dpt. for Industry & Infrastructure development, Deputy Head of Dpt.	Local Authorities	Volodymyr Bondaruk Kyivsky Maidan 9, 43027 Lutsk, Ukraine +38 (0332) 778153 / +38 (0332) 778259 nachveez@gupri.voladm.gov.ua
24	**Zakarpattia Oblast**		
24.1	Head of Zakarpattia Oblast State Administration	Zakarpattia Oblast State Administration	Oleksandr Oleksandrovych Ledyda admin@carpathia.gov.ua Uzhhorod, Narodna Square 4, Office 145, Tel.: 69-61-15
24.2	Main Department of Economics	Zakarpattia Oblast State Administration	http://www.economy-oda.uz.ua/ Uzhhorod, Narodna Square 4 First Deputy Head: Vasyl Fedorovych Vovknych 61-46-79
24.3	Department for Regional Development, Urban Planning and Architecture	Zakarpattia Oblast State Administration	88008 Uzhhorod, Narodna Square 4 Head: Andriy Ivanovych Zhiha (tel./fax: 35307, direct: 32433) The department comprises the Regional Development Division headed by Roman Andriyovych Mikityn (tel./fax: 34571) and the Urban Planning and Architecture Division
24.4	Zakarpattya Oblenergo OJSC Zakarpattia Oblenergo	Local Authorities	Andriy Ganzel +38 (050) 540 6725 a.ganzel@mail.ru
25	**Zaporizhzhia Oblast**		
25.1	Main Department for Industry and Infrastructure Development	Zaporizhzhia Oblast State Administration	69107 Zaporizhzhia, Lenina Avenue, 164, e-mail: upromzoda@i.ua Head: Euhen Hermanovych Semechayevsky
25.2	Main Department of Economics		69107 Zaporizhzhia, Lenina Avenue, 164, e-mail: uprek@zp.ukrtel.net Head: Ella Valeryivna Slepian

			224-63-26 / 239-02-53
26	**Zhytomir Oblast**		
26.1	Zhitomyr Oblast State Administration	Local Authorities	Sergiy Ryzhuk, Head of State Administration 10014 Zhitomyr, S.P. Korolyova Square 1 +38 (0412) 413490 / +38 (0412) 475075 ztobladmin@zt.ukrpack.net
EBRD-CONNECTED ORGANISATIONS			
27.	USELF	EBRD Program	01601 Kyiv Ukraine, Shovkovycgna str 42/44, of. B, Business centre 'Horizon Office Towers' Tel +380-44-2895632, Oleksiy Romanov, expert on economic issues, email oleksi.romanov@uslf.com.ua
28.	Fitchner/Imepower	Firms associated with management of the USELF lending facility	Dr. Ralf Walther, Project Manager, Ukraine Sustainable lending Facility, 4th Floor, Office B, BC Office Towers 42-44 Shovkovychna Str. 01601 Kyiv, Ukraine Tel: +38099-5342027 Ralf.walther@uself.com.ua www.uself.com.ua
29.	Presentation at EBRD on Commercial Use Biomass for CHP Applications (in Bulgaria, Romania, Ukraine, Belarus, and Turkey).	Separate EBRD-funded project	Dietmar Hagauer, Consultant Osterreichische Bundesforeste AG (OBF) Pummergasse 10-12 3002 Purkersdorf, Austria Phone: +43 (2231) 600-5590 Email: Dietmar.hagauer@bundesforste.at Local partner, Alexander Ivanov, Project Manager Optimus Limited 45 A Dnistrovska St. office 8, Ivano-Frankivsk, Ukraine, 76018 Phone: +38 0342504605 Email: Optimus_development@ukr.net
30.	Regional Capacity Building Initiative II (RCBI II)	EU project	Anatoliy Pavelko Country Specific Expert, Ukraine rcbi-east@rcbi.info mobile: +380676633672 website: http://www.rcbi.info
CONSULTANCY, UNIVERSITIES AND RESEARCH CENTRES			
31.	Council of the Study of the Productive Forces of Ukraine	Research centre	Ukraine Kyiv, Tarasa Shevchenko blvd, 60, off. 1102 Khlobystov Ievgen, Heard of the department of sustainable

	(SOPS)		development and environmental safety. Mob. 066-221-01-99 khlobystov@rvps.kiev.ua
32.	National institute for strategic studies	Research centre	Ukraine Kyiv, Pirogova str, 7-a Tel: (380-44) 234-5007 fax: (380-44) 235-2060 http://www.niss.gov.ua/ Vyacheslav Potapenko, Chief Expert on technogenic and environmental safety Mob. 067-408-14-54 potapenko@ukr.net
33.	National Academy of Sciences, institute of ornithology	Research centre	Ukraine Kyiv Volodymyrskaya str 14 Gleb Garvis, Head of the Department
34.	Taras Shevchenko National University of Kyiv	University	Ukraine Kyiv Glushkova avenue, 2, r. 417 Department of socio-economic geography Faculty of Geography, National Shevchenko University, , Mezentzeva Natalia, associate professor Mob. 050-858-41-73 , provotarnat@ukr.net
35.	National Technical University of Ukraine 'Kyiv Polytechnic Institute', Institute of energy saving and energy management	University	Ukraine Kyiv, Politekhnichna str., 6, http://tef.kpi.ua/16 Power engineering faculty, Karaeva Natalia , associate professor Mob. 097-627-24-25 Ukraine 03056 Kyiv , Borshagivska str, 103, tel. 406-83-08, 454-93-75 http://iee.kpi.ua , Rozen Victor, Head of the Department, professor. e-mail: iee@ntu-kpi.kiev.ua, rosen_wp@mail.ru
36.	Tavricheskiy National University named after Vernadskiy Department of geo-ecology	University	95007 Ukraine Simferopol Vernadskogo av, 4, of. 326B Tel +380-050-8038055 Prokopov Grigoriy, senior lecture Email: pleco@i.ua
37.	Ukrainian National Forest Engineering University Institute of Environmental Economics	University	103 General Chuprynka Street, Room 51, Lviv 79057 Tel./Fax: (032) 297 03 88; E-mail: iee_nltu@ukr.net IEE Director: Liudmyla Ivanivna Maximova, Associate Professor, Liudmyla Dmytrivna Zahvoiska, Associate Professor, Oleh Tadeyevych Danchuk, Deputy Rector on Training/Research/Production Activities, Associate Professor, Ph.D.

			in Agro-Sciences Tel.: (032) 237 79-90; Mobile 067 4713330 Yaroslav Mykhailovych Hnatyshyn, Department of Production Process Automation, Electric and Thermal Engineering Ivan Herasymovych Voytovych, Prof., Wood Fabrication Technology Department, tel.:+380-32-238-45-04, home tel.: +380-32-221-28-24 E-mail: nlutov@txnet.com
38.	Lviv State Agrarian University	University	Vitaly Mefodiyovych Boyarchuk, Deputy Rector, Head of Power Engineering Department Mobile: 050 3707101 http://www.lday.lviv.ua Tel.: (0322) 945-501; Fax: (0322) 946-919 292040 Dubliany, Zhovkva District, Lviv Oblast lday@mail.lviv.ua
39.	Lviv Polytechnic National University	University	Yevhen Vasyliovych Krikavsky, Head, Department of Marketing and Logistics, Dr. (Economics) 12 Stepan Bandera Street, Lviv 79013, Ukraine Secretary: +38032 258 26 25 Tel./Fax: +38032 258 25 10 Email: ywkryk@polynet.lviv.ua Mobile: 067 67 22 554
40.	Ekologicheskie Sistemy Energy Service Company (ESCO ECOSYS)	Consultancy, audit	ESCO ECOSYS Ukraine, 69035 Zaporizhzhia Mayakovsky Avenue 11, Tel.: +38 061 224 68 12; tel./fax: +38 061 224 66 86, e-mail: ecosys@zp.ukrtel.net http://www.ecosys.com.ua
41.	Public enterprise “Inter-Branch Scientific and Technological Centre for Wind Power Engineering” & Institute of renewable energy	Consultancy, research center	Kyiv, Chervonogvardiyska str., 20a Tel / fax 044-558-58-09 Dr. Stepan Kudrya – director (mob. 067-465-66-68) PhD Borys Tuchynsky – deputy director on scientific work, Vadym Tochenyj - deputy director on public and authority communication

			(he is also project manager “Nature Energy” in state agency National Projects under patronage of the President of Ukraine)
42.	Investment Energy Saving Service Company	Consultancy	31 Dehtiarivska Street, 03057 Kyiv, Ukraine Fax: (044) 241 67 69; Tel.: (044) 592 99 07 Director: Pavlo Viktorovych Rosen
43.	Agricultural Technologies	Consultancy	Nataliya Panchenko Director 72 Soborna Street, 08600 Kyiv, Ukraine, P.O.B. 203 +38 (044) 351 1031; +38 (044) 351 1032 narcom@carrier.kiev.ua
44.	Mosaic Investments	Consultancy	Elena Grechaninova Vice-President, Head of Research 1 Mezhyhirska Street, 04070 Kyiv, Ukraine +38 (044) 591 5561 +38 (050) 312 0471 egrechaninova@mosaic.kiev.ua
45.	SolarUA	Consultancy	Dmitry Lukomskiy Chief Operating Officer 34 Obolonsky Avenue, Office 172, Kyiv, Ukraine +38 (067) 124 5006 lukomskyy@gmail.com
46.	MKD Consulting	Consultancy	Mikhail Prazian Director General 38 Predslavynska Street, Office 121, 03150 Kyiv, Ukraine +38 (044) 529 8921 ok@mkd.kiev.ua
47.	BETEN International	Consultancy	Oksana Borovska Business Developer 29 Reitarska Street 29, Office 13, 01034 Kyiv, Ukraine +38 (044) 5319012 +38.067.945.58.50 oborovska@beteninternational.com
48.	Global Carbon Ukraine	Consultancy	Svitlana Ivanchuk Commercial Director 26B Velyka Zhitomyrska Street, 01025 Kyiv, Ukraine +38 (044) 272 0819; +38 (050) 311 9935 sivanchuk@gmail.com
49.	Fuel Alternative	Consultancy	Vitaliy Daviy

			160 Frunze Street, Office 909, 04073 Kyiv, Ukraine +38 (044) 383 0356 +38 (067)465 7940 info@fuelalternative.com.ua
50.	Scientific Engineering Centre "Biomass" Ltd. (SECB)	Consultancy	Ukraine, 03067, Kiev, postal box 66 Phone: +38 044 332-9140 Dr Georgiy Geletukha, Director Mobile: +38 050 358 2454, email: geletukha@biomass.kiev.ua
51.	Tavricheskiy National University named after Vernadskiy Scientific information centre 'Technologies for sustainable development'	Consultancy	95007 Ukraine Simferopol Vernadskogo av, 4 Tel +380-652-637576 Karpenko Sergei, executive director Email: s_karpenko@rambler.ru
52.	Institute of Advanced Technologies	Consultancy Publisher	Alexandr Barladin, PhD, Director, +38 (044) 568-53-32, 02660, Ukraine, Kyiv,54, Popudrenka str., iat@antex.kiev.ua
DEVELOPERS AND EQUIPMENT SUPPLIERS			
53.	NOVYE ENERGETICHESKIE PRIORITETY (NEW ENERGY PRIORITIES)	Developers – wind, solar	Ukraine, Sevastopol, Tel.: 8(0692) 93-05-10 Technical support: +380503985007 Fax: 8(0692) 55-90-15 e-mail: nep777@yandex.ru http://nep.crimea.ua
54.	AgroIndustria	Developers – wind, solar	http://www.vetryak.com.ua/ Ukraine, Dnipropetrovsk Contact phone: +38 067 5126580; +38 067 5128430
55.			
56.	Concord Design and Construction Bureau	Developers –wind, solar	Central Office of Concord Group 49055, Ukraine, Dnipropetrovsk, Kirova Avenue, 82G Tel.: +38 0562 31 77 90 Fax: +38 0562 31 77 91 E-mail: office@concordgroup.com.ua

			http://www.concordgroup.com.ua Director: Euhen Yuriyovych Yerko
57.	ALTERNATIVE ENERGY COMPANY	Developers – wind, solar	Ukraine, Lviv Oblast, Drohobych Tel.: +38 03244 37682 Mobile: +38 067 785 1915 E-mail: polus_ua@ukr.net www.elektrostancii.in.ua skype: polus_ua
58.	New Energy Association Ukraine LLC	Developers - wind	Vladimir Gusev Project Manager 38 Turhenivska Street, Office 110, 01054 Kyiv gusev@nea-ukraine.com
59.	LVIVTEPLOELEKTROPROJECT, RESEARCH AND DESIGN INSTITUTE	Developers –hydro, other	79005 Lviv, Rustaveli Street, 7 Tel. (main): (032) 2762898 Contact phone: (032) 2762912 Fax: (032) 2769158 E-mail: lvivtep@utel.net.ua Chair of Board: Andriy Yaroslavovych Yastremsky
60.	TEPLOELECTROPROJECT, ENGINEERING COMPANY	Developers – hydro, other	79026, Lviv, Enerhetychna Street, 10 Tel. (main): (032) 2950231 Contact phone: (032) 2950232; Fax: (032) 2950236 E-mail: energo_lv@mail.lviv.ua Website: www.if-tep.com Director: Dmytro Ivanovych Losyev
61.	EnerhoInvest Ltd.	Developers - hydro	59 Soborna Street, 21000 Vinnytsia, Ukraine Tel.: +38(0432) 21-84-28 President: Volodymyr Hryhorovych Zhitnyk
62.	HydroEnergoComplex Company	Developers – hydro Equipment suppliers	4 Shlyuzova Street, Vyshhorod, Kyiv Oblast, 07300 Ukraine Tel.: +38(044) 249-14-13 Director: Valery Oleksiyovych Bazarny
63.	En.Green	Developers - hydro	Volodymyr Kochetkov Director kochetkovsukach@yahoo.com
64.	Aquanova Development	Developers - hydro	Permiakova Olena Director

			Kyiv, Schorsa Street 32 A, Office 1 +38 (050)351 3874 permyakova@cei.com.ua
65.	HydroEnergo LLC	Developers - hydro	Sergei Sokolenko Technical Director 131 Kuibysheva Street 83096 Donetsk, Ukraine +38 (067) 694 9394 G.A.O.S@i.ua
66.	Ukrgelios	Developers - solar	Oleksandr Myshkevich Deputy Director, Project Manager Chervonoarmiyska Street 76, 83000 Donetsk, Ukraine +38 (050) 594 1803 ademiskif@mail.ru
67.	Big Dutchman (partner to UkrGelios)	Developers - solar	Oleg Nederya Deputy Director 13/10 Novokostyanitynivska Street, Office 306, 04080 Kyiv, Ukraine +38 (067) 505 1954; +38 (050) 473 1826 OGN2004@yandex.ru
68.	Solar A.A. PJSC Kvazar	Developers - solar	Alexander Yudenko Head of Solar Department 3 Pivnicho-Syretska Street, 04136 Kyiv, Ukraine +38 (050) 782 0236; +380(44) 205 34 51 oved@kvazar.com
69.	ECO SYSTEM COMPANY	Developers – solar, hydro	79059 Lviv, Mykolaichuka Street, 24 Tel. (main): (050) 1000012 Contact phone: (067) 9072029 E-mail: office@evikcia.com Website: www.ekosystem.lviv.ua Director: Lubomyr Volodymyrovych Brych
70.	CRIMEAN HEATING COMPANY	Developers -solar	Tel: +380692944859 (Sevastopol), +380652703994 (Simpheropol), +380654276159 (Yalta), Mobile: +380955051482 e-mail: 472400@mail.ru Sevastopol, Crimea, Ukraine
71.	HelioProject	Developers – solar	95050, Crimea, Simpheropol, Chaikina Lisa Street 1, Office 413A

			(095) 1288805 E-mail: gelioproekt92@yandex.ru
72.	Inter Car Group	Developers - biogas/biomass	Sergiy Nechyporenko Vice-President 31 Oskolska Street, 03028 Kyiv, Ukraine +38 (044) 496 8696 nsa@icg.ua
73.	Agrofirma Agrotis LLC	Developers - biogas/biomass	Olga Vinogorodska Director of Investment Program 25 Hornostaivska Street, 83059 Donetsk, Ukraine +38 (062) 3404552; +38 (062) 3404586 karanovich_l@donetsksteel.com
74.	VEMA Carbon	Developers - biogas/biomass	Sergiy Apostolaka Technical Director 9A Zasiadko Avenue, 83054 Donetsk, Ukraine +38 (050) 473 5567 apostos@ukr.net
75.	Green Gas International	Developers - biogas/biomass	Andrey Garanin Andrey.Garanin@greengas.net
76.	Biodiesel Crimea Company	Developers - biogas/biomass	43 Danylov Street, 95021 Simpheropol, Crimea, Ukraine Tel.: +38(0652) 52-79-95 / +380 50 555 18 00 http://biodiesel.crimea.ua manager@biodiesel.crimea.ua Director: Dan Tykhomyrov
77.	Teplo Plus Tekhinka Ltd.	Developers - biogas/biomass Equipment suppliers	9 Heroiv Avenue, 49100 Dnipropetrovsk, Ukraine +38(097) 728-25-79 http://par.dp.ua info@par.dp.ua General Director: Stanislav Oleksiyovych Bilohurov
78.	Alten GES	Developers - other	Victor Akatov Deputy Director 11 M. Raskova Street, Building A, 02660 Kyiv, Ukraine +38 (044) 490 5309; +38 (050) 876 8675 vakatov@ukr.net; sipgydro@ukr.net
79.	SC "Stankosert", Chief Engineer	Developers - other	Alexander Fel, Odesa-101, Onilova Lane 16

			+38 (048) 725 9266 / +38 (067) 940 8592 ozto@ukr.net
80.	Ukrainian Alternative Energy Company	Developers - other	Ukraine, Kyiv, 04050 Turhenivska Street 74, Office 2 Tel. +38 (044) 361-39-00; +38 (098) 103-46-99 Mobile: +38 (094) 926-09-00; +38 (095) 010-64-46 Reception desk: +38 (044) 486-60-03; +38 (068) 100-09-82 Fax: +38 (067) 236-83-01 Life: +38 (063) 145-74-37 Email: mail@ae.net.ua
81.	Industrial Ecology Institute (independent professional organization)	Developers – other	Ukraine, 03057 Kyiv, Zheliabova Street 2A (for written communications: 01010 Kyiv-10, P.O.B. 78) Tel. (38 044) 453-28-62, tel./fax (38 044) 456-92-62 e-mail: engeco@kw.ua
82.	KMT Enerhia Energy Service Company	Developers – other	60 Lenina Avenue, Unit 709, 61072 Kharkiv, Ukraine +38(057) 717-66-42; 717-66-43 http://www.kmte.com.ua Director: Yuri Olehovych Borovskiy office@kmte.com.ua
83.	Global Technology	Developers – other, consultancy	78 Chuhuivska Street, 61140 Kharkiv, Ukraine +38(057) 717-71-84 http://www.gt-nrg.com Director: Volodymyr Serhiyovych Lyubertsev
84.	ENERGY SAVING AND ALTERNATIVE ENERGY CENTRE	Developers – other Consultancy	61 Fabrychna Street, Drohobych, Lviv Oblast 82100 Ukraine energy@drohobych.com.ua 8 (03244) 41-08-94 http://energy.drohobych.com.ua
85.	Sunwind	Developers – other Consultancy	http://sunwind.ub.ua/ Kherson, Lenina Street 29 Tel.: +38 (067) 9290442 sunwind@ukrpost.ua
86.	LVIVPROJECT RECONSTRUCTION	Consultancy,	79034 Lviv, Panasa Myrnoho Street 24, Office 314

	RDE	Equipment suppliers	Tel.: (098) 2631588, (067) 3703529; fax: (032) 2320782 E-mail: LvivPR@ukr.net Director: Andriy Yaroslavovych Vartovnyk
87.	EnviTec Biogas AG	Equipment suppliers	Yuri Tsaplin Head of Marketing Ukraine P.O.B. 91, 04212 Kyiv +38 (044) 227 3650 +38 (050) 334 8315 yuri.envitec-biogas@cdmaua.com
ASSOCIATIONS AND NGOs			
88.	Creative union of scientific and engineering societies of Crimea	Professional association	95013 Ukraine, Crimea, Simferopol, Sevastopolskaya str, 45, tel +380-652-27-34-51 Aleksandr Slepokurov, Head email: slepokurov_al@rambler.ru Neonila Gracheva, president of Chamber of Commerce and Industry, email: cci@cci.crimea.ua
89.	Association of the farmers of Crimea	Professional association	95000 Ukraine, AR Crimea Simpheropol, tel +380652-276545, mob +3800951792275 Yuri Komov, head Email: komov.crimea@mail.ru
90.	Chamber of Commerce and Industry of Crimea	Professional association	95013 Ukraine, Crimea, Simferopol, Sevastopolskaya str, 45, tel +380-652-248638 Evgeny Savinov, first vice-president email: cci@cci.crimea.ua
91.	UkrHydroEnergo	Professional association	Ukraine 04112 Kyiv, Tankova str, 8, of.15. tel 380 44-4560024, web: www.ukrhydroenergo.org Karamushka Oleksandr, executive director, email: postmaster@ukrhydroenergo.org
92.	Ukrainian Wind Energy Assoc.	Associations/NGO	Andriy Konechenkov Saksahanskoho Street 68, Office 1, 01033 Kyiv, Ukraine +38 (044) 223 2996 / +38 (044) 289 2616 uwea@uwea.com.ua
93.	Netherlands Ukrainian Sustainable Energy Platform (NUSEP)	Associations/NGO	Ruslan Delidon P.O. Box 307 3360 AH Sliedrecht, The Netherlands;

			Office in Ukraine: Hrushevskoho Street 4, Office 401 +38 (044) 492 7075 / +38 (067) 509 7817 ruslan.delidon@nusep.org
94.	Sodruzhestvo Ltd.	Associations/NGO	Alexander Ovdiyenko 29 Pavlivska Street, 01135 Kyiv, Ukraine +38 (044) 484 0275 / +38 (067) 209 1723 oav@umkos.com; avo@bgs.kiev.ua
95.	Foundation for the Development of Environmental and Energy Markets	Association / Non-commercial organization	Ukraine, Kyiv, telephone: 38 (044) 483-4215, Vadim Diukanov, Executive Director, E-mail address: vadim.diukanov@fdeem.org.ua
96.	Mama-86	NGO	Ukraine 03057 Kyiv, 4 Yangel Academiscain st, of 126, web: www.mama-86.org.ua Anna Golubovska-Onisimova, president, email: anna@mama-86.org.ua
97.	All-Ukrainian Ecological League	NGO	Ukraine 01033 Kyiv Saksaganskogo st, 30-B, of. 33 tel +380-44-2893142, web: www.ecoleague.net Timochko Tetyana, Head, email: vel@eoleague.net
98.	Zelenyi Svit / Friends of the Earth Ukraine	NGO	• Ukraine 04070 Kiev, Kontraktova square 4, phone: +380 567 781301 (Kiev office) web: www.zelenysvit.org.ua Sergii Fedorinchik, chairman. Email: fedoryn@gmail.com
99.	Ukrainian society for the protection of birds (USPB) / BirdsLife Partner in Ukraine	NGO	Kyiv, Podvysotckogo str. 6A, office 40, tel. (380-44) 284-71-31, mob. (38-097)0-777-020 Dr. Oleg Dudkin
100.	Crimean Republican Association EKOLOGIYA i MIR	NGO	95022, Ukraine Crimea Kechkemetskaya str. 188, aprt. 1, Simferopol Tel/fax: +380-652-693-143 http://www.ekomir.crimea.ua Tarasenko Viktor, president Email: info@ekomir.crimea.ua
101.	National Ecological Centre of Ukraine (NECU, partner of	NGO	Ukraine 01032, Kyiv, Simona Petluyry str,1, Botanical garden after Fomin of Kyiv University, tel. +380-44 238-62-60 necu@i.kiev.ua,

	Bankwatch international)		vladlena@bankwatch.org Olena Miskun, national coordinator, email: miskun@bankwatch.org
102.	Society of Geoecologists	NGO	95007 Ukraine Simferopol Vernadskogo av, 4, of. 329, Tel +380-652-608590 Rudyk Oleksandr, deputy head Email: geo2004@crimea.edu
103.	"Environment-People-Law" (EPL) (formerly Ecopravo-Lviv)	NGO	Ukraine Lviv Ivana Franka str. 9, 1a Lviv 79005. : P.B. # 316 79000 Lviv. Tel./Fax:+38 (032) 2257682 E-mail: epac (a) mail.lviv.ua Web-page: epl.org.ua Olena Kravchenko, Executive director Lena@uoregon.edu Volodymyr Adam Lawyer of the 1st category adam@uoregon.edu
104.	Regional Sustainable Development Agency, Ivan Franko National University in Lviv	Regional NGO, Ministry of Science and Education of Ukraine, university	Doroshenko Street, Lviv, Ukraine Mob. 067-6702277, tel :0322394338 Volodymyr Shushniak, President, Ph.D. (Geography), Physical Geography Department
105.	International Association of Thermal Energy Companies	NGO	11 Molodohvardiyska Street, 03151 Kyiv, Ukraine +38(044) 405-95-30 (no response) http://www.matek.org.ua IATEC President: Dmytro Andriyovych Chubenko e-mail: pro@therm.kiev.ua Executive Director: Liudmyla Mykolaivna Krupska e-mail: office@matek.org.ua
106.	Environmental Investigation Bureau	NGO	9/6 O. Basarab Street, Lviv 79017, Ukraine Tel.: +38(032) 220-11-40 bei.ukr@gmail.com http://beiukr.blogspot.com/Dmytro Valeriyovych Skrylnikov, Lawyer, Board Member e-mail: Dskrylnikov@mail.lviv.ua
107.	Passive House Institute	NGO, business	P.O. box 6649, 14/4 Saksaganskogo Street, 79005 Lviv, Ukraine

	EcoInform Publishing House		tel. +38(032)260-21-89 mob.:+38 (067)673-46-44 Oksana Denys, President. e-mail: ipb@ri.lviv.ua e-mail: OksanaDenys@ri.lviv.ua
108.	KINTO	Equity Funds	Yuri Yurchenko Corporate Finance Director 2 Lysenka Street, 01034 Kyiv, Ukraine +38 (044) 246 7350, 7434 +38 (050) 469 8849 yurchenko@kinto.com

ATTACHMENT C - SER STAKEHOLDER ENGAGEMENT PLAN (SEP)

USELF
Ukraine Sustainable Energy Lending Facility

UKRAINE SUSTAINABLE ENERGY LENDING FACILITY (USELF)

STAKEHOLDER ENGAGEMENT PLAN (SEP)

Final
March, 2012

GEF

European Bank
for Reconstruction and Development

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LIST OF ABBREVIATIONS

EBRD	European Bank for Reconstruction and Development
EC	European Community
EIA	Environmental Impact Assessment
EU	European Union
NGO	Non-governmental organization
OVOS	National EIA procedure (also OVNS)
PP	Plan and program
PR	Performance Requirement
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SER	Strategic Environmental Review
TBI	To be identified
USELF	Ukraine Sustainable Energy Lending Facility

TABLE OF CONTENTS

1. INTRODUCTION

This Stakeholder Engagement Plan (SEP) provides the requirements for stakeholder engagement and public consultation process, stakeholder identification and grievance mechanism planned for the Strategic Environmental Review (SER) of the Ukraine Sustainable Energy Lending Facility (USELF) Programme.

1.1 Project Background

In order to encourage businesses to pursue sustainable energy projects, the European Bank for Reconstruction and Development (EBRD) has launched USELF. The USELF is aimed at providing development support and debt finance to renewable energy projects, which meet required commercial, technical and environmental standards.

In co-operation with the Ukraine's national authorities, the USELF has commissioned a Strategic Environmental Review (SER) focusing on renewable energy technologies in selected areas of the Ukraine. The main purpose of the SER is to "lay out a path" for later environmental reviews of specific renewable energy projects.

The SER is evaluating the impacts of developing renewable energy projects on environmental resources, communities, and the economy. It is identifying strategies to avoid, minimize, and mitigate those impacts while moving projects forward.

EBRD considers stakeholder engagement as an essential part of good business practices and corporate citizenship, and a way of improving the quality of projects. In particular, effective community engagement is central to the successful management of risks and impacts on communities affected by projects, as well as to achieving enhanced community benefits. With respect to EBRD requirements, USELF SER process and stakeholder engagement are organised in two main stages (**Figure 1**).

Figure 1: USELF SER process

- The key objectives of the scoping stage (November, 2010 – May, 2011) are to disclose information about USELF SER and to identify key environmental and social issues for SER.

- The next stage, strategic environmental review and scenario analysis (February – September, 2011) aims to complete the USELF Draft SER environmental report and to consult the Draft SER report with stakeholders and general public.

1.2 Objectives of Stakeholder Engagement Plan (SEP)

The primary objective of the SEP is to map out the strategy for engaging the various stakeholder groups and public in the activities of the USELF SER. The SEP will identify and describe key USELF SER stakeholders, public and other interested groups. It will also summarise the process of how consultation will work, how feedback and comments will be taken into account and how any grievances will be handled.

1.3 Structure of SEP

The remainder of this SEP is organized as follows:

- Chapter 2 briefly describes applicable regulations and requirements for stakeholder engagement and public consultations.
- Chapter 3 summarizes previous and on-going stakeholder engagement and public consultation activities.
- Chapter 4 identifies USELF SER stakeholders and describes communication methods with them.
- Chapter 5 describes stakeholder engagement program and disclosure of information.
- Chapter 6 describes roles and responsibilities for handling the SER consultation and information disclosure process.
- Chapter 7 and Chapter 8 describe how the comments on the SER can be submitted and defines a grievance mechanism by which feedback, comments, concerns and complaints may be communicated to SER developers and how these grievances and comments will be handled.

2. REGULATORY CONTEXT

2.1 Ukrainian legislation for public consultation

It is important to note that the USELF SER is not intended to support decision making of a particular national authority; rather it is undertaken to support the EBRD's planning for its USELF program implementation in Ukraine; for this reason it is called a Strategic Environmental *Review*, not *Assessment*. According to the national legislation, there is no legal requirement or responsibilities to carry out an SEA on the proposed lending facility, and it does not meet the criteria for obligations under Ukraine's ratification of the UNECE SEA Protocol.

Ukraine is a signatory for Aarhus Convention that requires public access to environmental information and decision-making[1] and is directly applicable to the current SER. National legislation also foresees broad public involvement in decision-making process. On the strategic or 'programmatic' level, the Ukrainian legislation requires that the public be consulted on the issues of development and implementation of state policies[2]. The current SER is not, strictly speaking, subject to these national regulations; however, they are taken into account when designing stakeholder engagement processes, in order to account for national regulatory context.

The USELF SER stakeholder engagement process is, therefore, being undertaken in line with best international practice, requirements of EBRD's Environmental and Social Policy (2008), and more specifically the Performance Requirement 10 "Information Disclosure and Stakeholder Engagement" (PR10), which stipulates the requirements for information disclosure and stakeholder engagement. The stakeholder engagement process also accounts the requirements of Aarhus Convention.

In addition, the USELF SER Project is guided by the EU Strategic Environmental Assessment Directive (EU SEA Directive 2001/42/EC) as part of EBRD requirements and the SEA Protocol to the UNECE Espoo Convention, as part of Ukrainian requirements.

2.2 The EU SEA Directive

The process outlined in this SEP meets the requirements of the SEA Directive. Each Strategic Environmental Assessment (SEA) process is based on a systematic approach to ensure significant cumulative environmental and socio-economic effects arising from the adoption and implementing of plans and programs (PPs) are assessed, mitigated, communicated to decision-makers, monitored and that opportunities for public involvement are provided. Such an assessment is performed on a programmatic level and is based on integrated approach. There are two key components of the assessment:

- Preparation of an environmental report that identifies, describes and evaluates the likely significant cumulative environmental effects of plans/or programs implementation, as well as discusses reasonable alternatives.

[1] UNECE Aarhus Convention on access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters

[2] Decree of the Cabinet of Ministers of Ukraine as of November 3, 2010 N 996 "Order of the public consultations on the issues of development and implementation of the state policy"

- Conducting stakeholder and public consultations (with the local authorities having environmental responsibilities, other authorities, the public that is affected or likely to be affected, or having interest in, relevant NGOs, academic institutions and other interested parties)

The environmental report, addressing all issues associated with scoping, analysis of alternatives, identification and analysis of effects, monitoring the environmental effects and the results of stakeholder and public consultations is to be considered prior to the plan/or program is adopted.

2.3 EBRD Requirements for Stakeholder Engagement and Public Consultations

EBRD requires a SEP to be disclosed during scoping and SER report consultation stages to inform the public on opportunities for consultation/comments and information on managing grievances.

Key principles, requirements, methodological and procedural aspects of stakeholder engagement process for the projects, financed by EBRD are described in detail in EBRD 2008 Environmental and Social Policy, Performance Requirement 10 (PR10) "Information Disclosure and Stakeholder Engagement"[3]. PR10 outlines a systematic approach to stakeholder engagement that will help clients build and maintain over time a constructive relationship with their stakeholders, including the locally affected communities.

As required, the following important stages shall be implemented for the USELF SER stakeholder engagement and consultation process:

- The key stakeholders should be identified, including the competent authorities and the affected communities
- The detailed arrangements on informing and consulting with the competent authorities and the public concerned should be determined
- The stakeholder engagement is considered to be an on-going process starting as early as practically possible and evolving during the whole lifecycle of the initiative
- Special attention needs to be paid to the affected communities and vulnerable groups
- Grievance mechanism shall be developed, described and implemented

The USELF SER stakeholder engagement process and SEP preparation was also guided by the IFC Good Practice Handbook[4] that defines the best practice approach to stakeholder engagement.

[3] EBRD Environmental and Social Policy 2008 (http://www.ebrd.com/downloads/about/sustainability/2008policy.pdf)
[4] http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/p_StakeholderEngagement_Full/$FILE/IFC_StakeholderEngagement.pdf

3. SUMMARY OF STAKEHOLDER CONSULTATIONS

3.1 EBRD previous stakeholder engagement and consultations in Ukraine

In 2007-2008, during the early stages of renewable energy program development for Ukraine, the EBRD launched the assignment *Ukraine Renewable Energy Development Framework (Phase I)* (TCS numbers 21216 and 25329), which was funded by the Government of the Netherlands. This assignment was to provide technical assistance in renewable energy regulatory support and institution building to the Ukrainian Ministry of Fuel and Energy (MFE) and the National Agency on Efficient Energy Resources Management of Ukraine (NAER). The part of the assignment involved extensive stakeholder dialogue to establish the appropriate structure for renewable energy regulation in Ukraine.

A number of key stakeholders and interested parties were identified at that stage, including local authorities and regulators at different levels, potential donor agencies, scientific and research institutes, and private developers. All targeted groups were contacted, and a series of individual meetings and workshops were organized and undertaken.

3.2 USELF SER Consultations

USELF SER consultations have been organized in two stages:

- Stage 1 (November 2010 – May 2011): During the USELF SER scoping consultations, the information about USELF SER and SER Scoping Report was disclosed to 135 representatives of various stakeholder groups; 48 of them were individually interviewed. The initial list of stakeholders that came out as a result of stakeholder identification and analysis has been expanded and amended to ensure sufficient focus on priority areas for renewable energy development identified within the framework of the USELF Programme (Western Ukraine, Black Sea Region and Dnipro Basin). Special focus has been placed on the representatives of local authorities, manufacturers, developers and consultancies involved in the development/implementation of renewable energy projects in Ukraine. In May-June 2011, two meetings with NGOs and practitioners have been carried out in Kyiv and Odesa.

- Stage 2 (December 2011 – April 2012): The stage involves public consultations on the USELF Draft SER report. The consultations are being carried out to date and specific information on the USELF Draft SER report consultation program is provided below in Chapter 5. The strategy suggested for further consultations implies the support of regional governments and/or powerful business structures (for example, Chambers of commerce or specialized associations dealing with renewable energy). This support is essential and will facilitate the consultation process in the regions. In general, two consultation rounds have been planned for Stage 2. The rounds will include the following activities:
    - Presentation meeting in the target regions: SER findings will be presented to the regional stakeholder groups; SER will be disclosed and posted to the local visitor centers organized for this purpose. One united meeting is going to be

organized in the regional capital; the place and time will be agreed with the regional Administrations and announced in official media as well as the place of the documentation disclosure. The tentative timetable for the meetings is shown in **Appendix C** of this document. When the detailed information on location and timing of the proposed meetings are available, the Appendix C will be revised and updated.

- Feedback meetings: they will be carried out in all target regions in a month if the interest will be outlined/justified.

4. STAKEHOLDERS IDENTIFICATION AND COMMUNICATION

This chapter describes the various categories of identified stakeholders and addresses engagement/communication methods and specific media that will be used to notify stakeholders of information.

At the first step of the USELF SER stakeholder engagement and consultation process, the key stakeholder groups have been identified as being either affected by the USELF Programme or who may be interested in the Programme. Total of 7 key stakeholder categories, accounting approximately 135 stakeholders were identified, including:

- USELF and their potential applicants (developers);
- State authorities
- Regional authorities
- Regional chambers of commerce
- National and international NGOs
- Academic organizations, institutions and consultancies
- General public

Stakeholder map in **Figure 2** shows the geographical distribution of identified stakeholders within the Ukraine. The target regions were identified based on the following selection criteria:

- Potential for renewable energy projects (sources and investment activities);
- Regions not covered by the initial consultation processes
- Presence of existing renewable energy projects and infrastructure.

Table 1 describes the key stakeholder groups and communication process by addressing communication methods and specific media that will be used to notify stakeholders of information, such as opportunities for public consultation or significant changes.

In addition, a stakeholder register has been compiled and is presented in **Appendix A**. The register lists all stakeholders identified during the initial and scoping consultations stages of the SER consultation process.

Others who wish to be included in the stakeholders list, please contact Ivan Maximov, Black & Veatch Moscow, telephone: +7 (495) 232-67-38, Ukrainian cell phone number: +380 68 121-1245; email: maximovi@bv.com and you will be placed into the mailing list for

information on USELF SER progress, reporting, meetings, or other consultation opportunities.

Any suggestions for improvement of proposed communication methods or media are welcome and can be submitted via the contact information at the end of this document (Chapter 7).

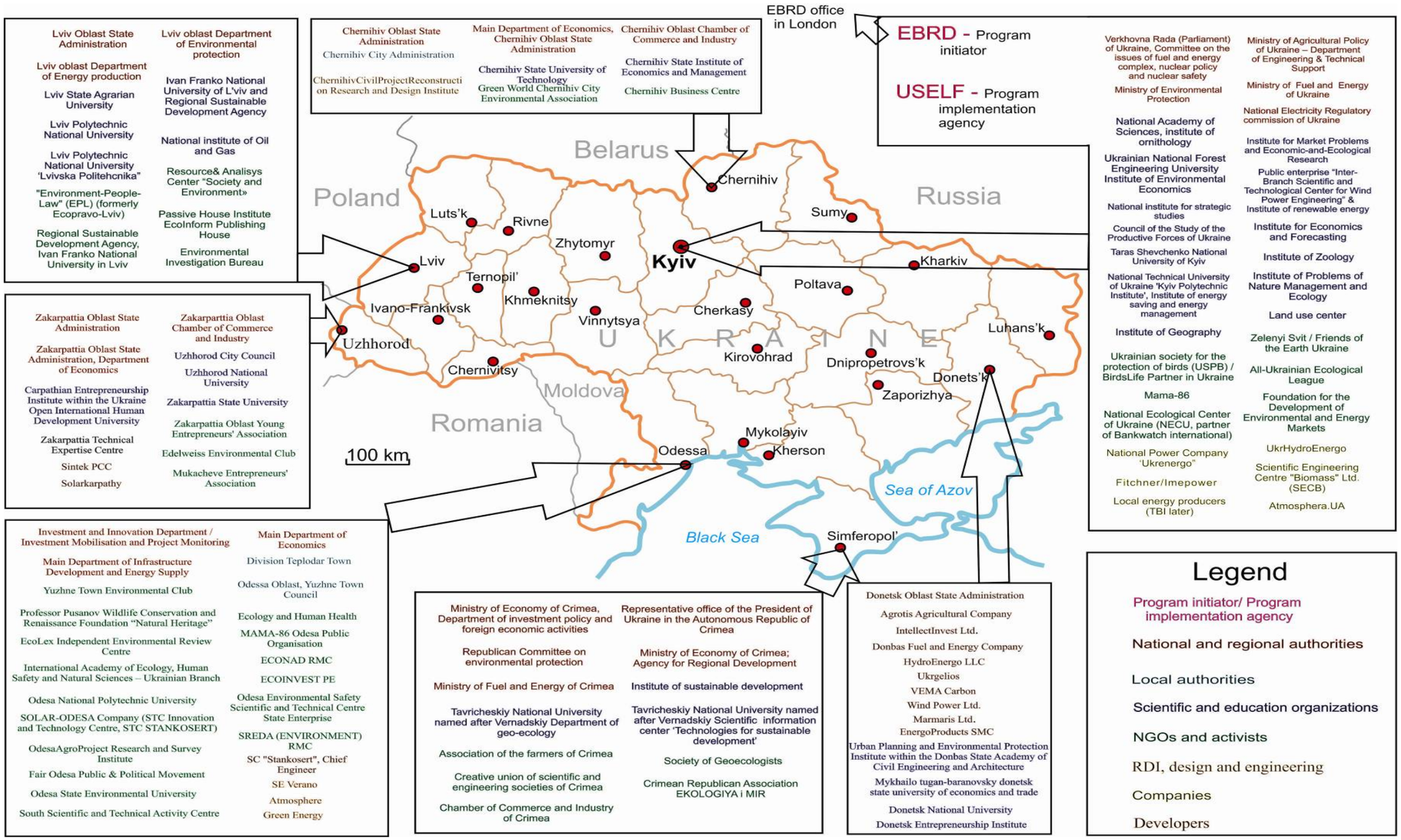


Figure 2: Geographical distribution of identified USELF SER stakeholders

Table 2: USELF SER stakeholder identification, engagement and communication methods				
	Stakeholder group	**Description**	**Means of engagement and communication**	**Proposed Media**
1.	**USELF and their potential applicants**	USELF and their actual and potential applicants are the main beneficiaries and the key stakeholders of the SER process. This group is interested in the USELF program development; they also have to assess and manage the environmental and social issues of their individual projects for meeting EBRD and national requirements.	- Ongoing working linkages with USELF - Emails and phone - Capacity building workshops	- USELF SER website: www.uself-ser.com[5]
2.	**State level authorities**	National authorities responsible for alternative energy development, electricity distribution, environmental protection, public health, cultural heritage, agriculture, tourism development might be potentially interested in particular aspects of the USELF SER and its outcomes.	-Ongoing working linkages with Ministry of Fuel and Energy, NERC, NAER and Ministry of Ecology and Natural Resources -Communication with authorities via newsletters, emails and phone - Individual meetings - Official correspondence	USELF SER website: www.uself-ser.com
	- Ministry of Fuel and Energy			
	- National Electric Regulatory Commission (NERC)			
	- National Agency on Sufficient Energy Resources Management (NAER)			
	- Ministry for Ecology and Natural Resources			
3.	**Regional authorities**	Regional state administration (regional executive power agencies) have direct responsibilities for economic development, investment attractiveness, development of energy efficiency technologies and other issues. As a general rule, they are interested in the specific projects rather then in the strategic level assessments. At the same	-Ongoing working linkages with regional authorities and municipalities - Individual and/or regional public meetings - Official correspondence	- USELF SER website: www.uself-ser.com

[5] For a 120 days period of formal public consultations all key documents will be published on the USELF SER website in English and Ukrainian. In addition, a web based forum will be open at USELF SER website. The website will be periodically updated to reflect the latest and up to date developments in SER consultation process

Table 2: USELF SER stakeholder identification, engagement and communication methods				
	Stakeholder group	**Description**	**Means of engagement and communication**	**Proposed Media**
		time, the regions having bright perspectives for alternative energy development may be directly interested in the USELF SER and its outcomes.		
4.	**Regional Chambers of Commerce**	In some regions of Ukraine, the Chambers of Commerce are active and important players in investment processes. They are taking up the responsibilities of the intermediaries between businesses, authorities, and communities. Chamber of Commerce of the Autonomous Republic of Crimea were approached during the initial consultation stage and provided valuable comments and input. Regional Chambers of Commerce are seen important potential partners in organization of public consultations in target regions.	- Individual and/or regional public meetings - Official correspondence - Email and phone calls	USELF SER website: www.uself-ser.com
5.	**National and international NGOs**	Environmental NGOs and, more specifically, NGOs specialised in energy efficiency/alternative energy development have been identified as interested parties.	- Roundtable meetings and technical workshops - Individual meetings - Email newsletters and phone calls	USELF SER website: www.uself-ser.com
6.	**Academic organizations, institutions and renewable energy practitioners**	Academic institutions and practitioners who are actively involved in biodiversity conservation, watershed management, watershed restoration, ornithological and ecological research works and other environmental aspects of renewable energy	- Individual and/or regional public meetings/workshops - Email and phone calls	- USELF SER website: www.uself-ser.com - National newspapers: "Segodnya"; "Delo"

Table 2: USELF SER stakeholder identification, engagement and communication methods				
	Stakeholder group	**Description**	**Means of engagement and communication**	**Proposed Media**
		development may have direct interest in programmatic level of environmental impact assessment.		
7.	**Key regional stakeholder groups:**	General public in the target regions has been identified as a potentially interested category. However, it is not possible to identify the general public to the local community level, mainly, due to the scale of the strategic assessment.	- Open house meetings to discuss USELF Draft SER report -Presentation meetings will be organized in regional state administrations or in the Regional Chamber of Trade and Commerce. One united meeting is planned in the regional capital. The place will be coordinated with the regional administrations (and/or other supporting group). One united meeting is planed for every region. If local interest will be identified, additional meeting(s could be arranged on the Rayons. The places and timing will be announced in the official media not later then in two weeks before the meeting. - All SER documents will be available as hard copies (in	National newspapers: "Segodnya"; "Delo" (Kyiv)
	- Donetsk			Regional newspapers: "Donetskie news"; "Donbass" (Donetsk)
	- Lviv			Regional newspapers: Vysoky Zamok". "Lvivskaya Gazeta" (Lviv)
	- Uzhgorod			Regional newspapers: Uzhgorod", "Nydilya" (Uzhgorod)
	- Sim feropol			Regional newspapers: "Crymskie Izvestia", "Crymskaya Pravda" (Crimea)
	- Odesa			Regional newspapers: Odesa Daily", "Odesky Vistnyk" (Odesa)

Table 2: USELF SER stakeholder identification, engagement and communication methods				
	Stakeholder group	**Description**	**Means of engagement and communication**	**Proposed Media**
			Ukrainian) and CD (in English and Ukrainian) in local Rada's and /or libraries.	

5. INFORMATION DISCLOSURE AND STAKEHOLDER ENGAGEMENT PROGRAMME

This section describes how the consultation process worked during the scoping consultations stage, how the consultations will be organized during Draft SER report consultation stage and what type of information will be shared with the stakeholders and public during the USELF Draft SER report consultations.

5.1 Information disclosure

During the scoping consultations, the following information was disclosed to the identified USELF SER stakeholders:

- A summary of the USELF SER process, defining the main goals of SER and the way the stakeholder engagement and consultation process will be structured (hard and electronic copies of the USELF SER leaflet (flyer) in English and Ukrainian.
- A brief summary of the USELF SER project and its current status
- USELF SER draft Scoping Report (in English and Ukrainian). The SER Scoping Report was made available through the USELF SER website at www.uself-ser.com, as well as on CD per individual request.

For a 120-day USELF Draft SER report consultations (December 2011 – April, 2012), the following information will be available to the stakeholders and general public:

- USELF SER Draft Environmental Report (English and Ukrainian versions) published on the USELF SER website at www.uself-ser.com, or per individual request on a CD.
- USELF SER Technical Reports on Biomass, Solar, Small Hydro and Wind Potential and Renewable Energy Scenario Development in Ukraine (English and Ukrainian versions) published on the USELF SER website at www.uself-ser.com, or per individual request on a CD.
- USELF Stakeholder Engagement Plan (SEP), which will also be publically available through the USELF SER website at www.uself-ser.com or by a request on a CD. SEP will be available in English and Ukrainian.
- An updated USELF SER leaflet (flyer), describing the SER process, its purpose, practical application and main outcomes (available in Ukrainian). The leaflet will be distributed among key stakeholders electronically via email. It will also be available through the USELF SER website at www.uself-ser.com.

A range of communication methods will be employed during the USELF Draft SER report consultations as specified in **Table 2**. In summary, the methods of communication will include the following:

- Publication of the USELF SER Draft Environmental Report and USELF SEP in Ukrainian and English at the USELF SER website: www.uself-ser.com
- As noted earlier, CD copies of USELF SER Draft Environmental Report and USELF SEP will be available on individual request
- Hard copies and CDs with documents will be available in target regions Rada's and/or libraries

- Regional meetings with stakeholders (open room meetings)
- Technical workshops
- Announcements in national and regional mass-media
- Official correspondence with authorities
- Email and phone communication

5.2 Stakeholder engagement and consultation programme

Table 3 below describes the key elements of the USELF SER stakeholder engagement and consultation programme. A tentative schedule for USELF SER documents public disclosure and meetings is presented in the timetable in **Appendix C** of this SEP. *The timetable will be revised* prior to the public release of USELF Draft Environmental Report and renewable energy technical reports. The revised timetable *will specify the exact locations and dates for regional presentation meetings* so that all interested regional stakeholders could plan the attendance appropriately.

Events/Activities	***Tasks***	***Information for disclosure***	***Timeframe***
1. Scoping stage (December, 2010-May, 2011)			
1.1.Individual consultations with identified key stakeholders (Annex A)	Gathering baseline information; presenting SER process	Initial USELF SER flyer (in English and Ukrainian)	December, 2010
1.2. Posting draft SER Scoping Report on the Internet and establishing interactive web-site communications	Presenting the document to public for discussion and comments	Draft SER Scoping Report (in English and Ukrainian)	February, 2011
1.3. Phone/email/mail correspondence with key stakeholders	Gathering feedback on SER Scoping Report from the stakeholders	Draft SER Scoping Report (in English and Ukrainian)	April – May 2011
1.4. Capacity building workshop in cooperation with USELF	Building dialogue capacity for USELF and its applicants and local experts; introduction of SER approach	Draft SER Scoping Report; hand-out materials (in Ukrainian)	June 2011
1.5. Regional meeting in Odesa and NGO roundtable in Kyiv	Presentation of Draft SER Scoping Report	Draft SER Scoping Report (jn Ukrainian)	May, 2011
1.6. Capacity building workshop for USELF current and potential applicants	Increase awareness and facilitate capacity-building on SER outcomes application for the individual projects	Draft SER Scoping report, SEP	June, 2011
2. Second stage: Consultation on the USELF Draft SER report (November, 2011 - January, 2012)			
2.1.Preparation for public information campaign	Presentation of a SER process and outcomes	• USELF SER Environmental Report in Ukrainian • USELF SER	October– November, 2011

Events/Activities	*Tasks*	*Information for disclosure*	*Timeframe*
		Environmental Topic paper in Ukrainian • USELF SER Technical Reports in Ukrainian • Updated SER information leaflet (flyer) with outcomes	
2.1.1. Release of Draft SER documents in Ukrainian	Translating SER documents into Ukrainian	• USELF SER Environmental Report in Ukrainian • USELF SER Environmental Topic paper in Ukrainian • USELF SER Technical Reports in Ukrainian • USELF SEP in Ukrainian	December, 2011
2.1.2. USELF SER information leaflet (flyer) distribution among stakeholders	Drafting the information leaflet (flyer) and presenting the SER process and outcomes	Updated SER information leaflet (flyer). The flyer defines the purpose of the USELF SER, practical application of SER, major outcomes of SER	Leaflet release: December, 2011 Distribution period: December, 2011 and onwards
2.1.3. USELF SER and public drafting the articles for publication in regional newspapers	Presenting the SER process and outcomes		14 days prior to each regional meeting
2.2. First round of discussions in the target regions. Presentation meetings with regional stakeholders: Donetsk Lviv Uzhgorod Simferopol Odesa	Presentation of Draft USELF SER documents, including USELF SER Environmental Report, USELF SER Environmental topic paper and USELF SEP.	• Draft SER Environmental Report • USELF SER Environmental Topic paper in Ukrainian • USELF SEP • USELF SER information leaflet (flyer)	December, 2011-February, 2012
2.4. Establishing locations where the public in target regions can review the SER			January-February, 2012 *to be combined with the presentation*

Events/Activities	*Tasks*	*Information for disclosure*	*Timeframe*
documents, most likely public libraries (or other locations if advised by the authorities and other local partners)			*meetings*
2.5. Regional round tables/by-invitation workshops in the target regions	• Making the Draft SER documents available for review and discussion • Obtaining feedback, comments, concerns and recommendations from regional stakeholders	• Draft SER Environmental Report • USELF SER Environmental Topic paper in Ukrainian • USELF SEP • USELF SER information leaflet (flyer)	February – April, 2012. *Specific dates for meetings will be announced through SER and USELF public websites, and regional newspapers*
2.6. Roundtable with the NGOs in Kiev, if level of interest indicates the need for it	• Discussion of the SER results • Collecting feedback and comments from NGO groups	• Draft SER Environmental Report • USELF SER Environmental Topic paper in Ukrainian • USELF SEP • USELF SER information leaflet (flyer)	February-March, 2012
2.7. Collecting feedback and comments on Draft SER report	Discussion of the SER results	Draft SER documents	On-going process throughout the 120 day consultation period December, 2011 – April, 2012
2.8. Closing of public comment period	Obtain and process public feedback	Draft SER documents	At the end of the 120 day consultation period
2.9. Preparation of analytical report and final SER report	• Addressing all comments and feedback • Preparing a summary of the USELF SER stakeholder engagement consultation process	Final SER report	April, 2012

6. ROLES AND RESPONSIBILITIES

Black & Veatch and Ecoline EAC team will be in charge of stakeholder engagement and public consultation activities. It is envisioned that the SEP implementation process will end up after USELF SER process is finished (April 2012).

7. COMMENTS ON THE SER

After the USELF SER documents are made publicly available in draft form, a 120 day comment period will commence, from December 1, 2011 to April 1, 2012. All stakeholders can comment, suggest revisions, or add information that is pertinent to the SER process. Any person or organization may send comments in person or via post, email, or facsimile using the contact information, specified below. The comments will be reviewed, and where appropriate, the USELF SER documents will contain changes that result from the comments.

The comments will be summarized and organized by topic or issue. Comments will not normally be responded to individually; at the end of the consultation period, stakeholders will be notified by the above process (website, regional newspapers) of the final decision, a summary of comments received, and how the comments were taken into account. Comments can be in writing or at a public meeting where the comments are recorded.

- Electronically using the "public comment" link at www.uself-ser.com
- Electronically or by post to Black & Veatch or Ecoline EAC.

The comments and feedback can be submitted in Ukrainian, Russian and English. A Ukrainian speaker will be available to answer any questions related to the comments/feedback submittal process. For inquiries please contact:

1. Ivan Maximov, Black & Veatch Russia, Russia, 109147, Moscow, MosAlarko Plaza One, Marksistskaya street 16; Telephone: +7 (495) 232-67-38 (Moscow); Ukrainian local cell phone number: +380 68 121-1245 Email: maximovi@bv.com
2. Serhiy Varlamov (Ukrainian speaker), Phone: +380 099 133-9146; email: varlamovsergiy@mail.ru

8. GRIEVANCE MECHANISM

If there is a grievance about the SER process, there is a separate procedure from comments. All grievances will be acknowledged within 5 working days and responded to within 20 working days, and can be submitted to:

- Electronically using the "public comment" link at www.uself-ser.com; please specify Grievance in the communication/text.
- Electronically or by post to Black & Veatch

Complaints can be filed via mail or electronically, using email. A complaints form is shown in **Appendix B.** Claimant has a right to file an anonymous complaint. Yet, even in such cases, it is recommended to leave reliable contact information in order to obtain an answer. Complaints can also be introduced by phone. However, we will inform the caller that they must submit a complaint or comment in writing or at a recorded public meeting.

Any complaints or concerns received will be summarized and listed in a complaints log book, containing the name/group of commenter/complainant, date the comment was received, brief description of issues, information on proposed corrective actions to be implemented (if appropriate) and the date of response sent to the commenter/complainant. Any person or organization may send complaints in person or via post, email, or facsimile using the contact information, specified above. All complaints will be responded to either verbally or in writing, in accordance with preferred method of communication specified by the complainant in the comments and complaints form.

To submit a grievance, complaint or a concern, please use the following contact information: Attendance - Ivan Maximov, Black & Veatch Russia. Postal address: Russia, 109147, Moscow, MosAlarko Plaza One, Marksistskaya street 16; Telephone: +7 (495) 232-67-38; Fax number: +7 (495) 232-6739; Ukrainian local cell phone number: +380 68 121-1245 for inquiries; or submit it electronically via email to maximovi@bv.com or USELF SER website at your choice.

APPENDIX A – LIST OF STAKEHOLDERS IDENTIFIED DURING THE USELF SER INITIAL AND SCOPING CONSULTATIONS (NOVEMBER, 2010 – MAY 2011).

Stakeholder group	Region	Interest identified/Feedback provided at the scoping stage
Internal stakeholders		
USELF		
EBRD		
USELF 'applicants (TBS)		
State authorities		
Ministry for Ecology and Natural Resources of Ukraine	Kyiv	Contacted / low interest
Ministry of Energy and Fuel	Kyiv	Contacted / low interest
Ministry of Emergency Situations	Kyiv	Contacted / no interest
Ministry of Public Health	Kyiv	Contacted / no interest
Ministry of Culture and Tourism	Kyiv	Will be contacted (WBC)
Ministry of regional development, construction and housing and communal services of Ukraine	Kyiv	Contacted / low interest
National Agency for Ecological Investments	Kyiv	WBC
National Commission for Regulation of the Electric Energy of Ukraine (NERC)	Kyiv	Contacted / high interest
National Agency of Ukraine on the Issues of Ensuring Effective Use of Energy Resources (NAER)	Kyiv	Contacted / high interest
State Committee on Energy Saving	Kyiv	Contacted / interest
Committee on Fuel, Energy, and Nuclear Policy and Safety of the Ukrainian Parliament	Kyiv	Contacted / low interest
Regional authorities		
Main Department of Infrastructure Development and Energy Supply	Odesa	Phoned / no interest
Main Department of Economics	Odesa	Phoned / low interest
Investment and Innovation Department / Investment Mobilisation and Project Monitoring Division	Odesa	Phoned / no interest
Donetsk Oblast State Administration	Donetsk	WBC
Zakarpattia Oblast State Administration	Uzhgorod	WBC
Zakarpattia Oblast State Administration, Department of Economics	Uzhgorod	WBC
Zakarparttia Oblast Chamber of Commerce and Industry	Uzhgorod	WBC
Chernihiv Oblast State Administration	Chernihiv	WBC
Main Department of Economics, Chernihiv Oblast State Administration	Chernihiv	WBC

Stakeholder group	Region	Interest identified/Feedback provided at the scoping stage
Chernihiv Oblast Chamber of Commerce and Industry (Chernihiv)	Chernihiv	WBC
Crimea Integration and Development Program	Simferopol	Contacted / high interest
Autonomous Republic of Crimea (ARC) Committee on Environment	Simferopol	Contacted / high interest
ARC Committee on Energy Production	Simferopol	Contacted / interest
Land use center	Simferopol	Contacted /high interest
ARC Committee on entrepreneurship and investments	Simferopol	Contacted / interest
Lviv oblast Department of Environmental protection)	Lviv	Contacted / low interest
Lviv oblast Department of Energy production	Lviv	Contacted / low interest
Local Authorities		
Teplodar Town Mayor	Odesa	Contacted / no interest
Yuzhne Town Council	Odesa	Contacted / no interest
Uzhhorod City Council	Uzhgorod	WBC
Chernihiv City Administration	Chernihiv	WBC
Municipal authorities (in target regions)		
To be identified (TBI) later		
Companies		
JSC UKRENRGO	Kyiv	Contacted / high interest
Local energy producers (TBI later)		
SOLAR KW (department of OJSC Kvazar)	Kyiv	Contacted / high interest
SC "Stankosert"	Odesa	Phoned / low interest
IntellectInvest Ltd.	Donetsk	WBC
Donbas Fuel and Energy Company	Donetsk	WBC
Marmaris Ltd.	Donetsk	WBC
EnergoProducts SMC	Donetsk	WBC
Agrotis Agricultural Company	Donetsk	WBC
VEMA Carbon	Donetsk	WBC
HydroEnergo LLC	Donetsk	WBC
Zakarpattia Technical Expertise Centre	Uzhgorod	WBC
Bureau of Ecological investigations	Lviv	Contacted / low interest
Developers		
Atmosphera.UA	Kyiv	Phoned / no interest
Atmosphera.UA (Odesa Branch)	Odesa	Phoned / low interest

Stakeholder group	Region	Interest identified/Feedback provided at the scoping stage
Green Energy (Odesa)	Odesa	Contacted / high interest
SE Verano (Odesa)	Odesa	Phoned / no interest
Solar-Odesa Company (STC Innovation and Technology Centre, STC Stankosert)	Odesa	Phoned / no interest
Wind Power Ltd.	Donetsk	WBC
Ukrgelios	Donetsk	WBC
Solarkarpathy	Uzhgorod	WBC
Sintek PCC	Uzhgorod	WBC
RDI, design and engineering		
PP "KSP-Project"	Kyiv	Phoned / low interest
Scientific Engineering Centre "Biomass" Ltd. (SECB)	Kyiv	Phoned / low interest
Inter-Branch Scientific and Technological Center for Wind Power Engineering, Institute of renewable energy	Kyiv	Phoned / high interest
EcoLex Independent Environmental Review Centre	Odesa	Phoned / no interest
Odesa Environmental Safety Scientific and Technical Centre State Enterprise	Odesa	Phoned / no interest
South Scientific and Technical Activity Centre	Odesa	Phoned / no interest
ECOINVEST PE	Odesa	Phoned / no interest
ECONAD RMC	Odesa	Phoned / no interest
SREDA (ENVIRONMENT) RMC	Odesa	Phoned / no interest
Institute of sustainable development	Simferopol	Phoned / low interest
Scientific and education organization		
National institute for strategic studies	Kyiv	Contacted / low interest
Council of the Study of the productive Forces of Ukraine	Kyiv	Contacted / low interest
Taras Shevchenko National University of Kyiv	Kyiv	Contacted / low interest
National Technical University of Ukraine 'Kyiv Polytechnic Institute'	Kyiv	Contacted / low interest
Institute of Energy Saving and Energy Management	Kyiv	Contacted / high interest
Institute of Geography	Kyiv	Contacted / interest
Institute for Economics and Forecasting	Kyiv	Phoned / no interest
Institute of Zoology	Kyiv	Contacted / low interest
OdesaAgroProject Research and Survey Institute	Odesa	Phoned / low interest
Institute of Market Problems and Economic/Environmental Research of the National Academy of Sciences of Ukraine	Odesa	Phoned / no interest
International Academy of Ecology, Human Safety and Natural Sciences – Ukrainian Branch	Odesa	Phoned / no interest

Stakeholder group	Region	Interest identified/Feedback provided at the scoping stage
Odesa National Polytechnic University	Odesa	Phoned / no interest
Odesa State Environmental University	Odesa	Phoned / no interest
Urban Planning and Environmental Protection Institute within the Donbas State Academy of Civil Engineering and Architecture	Donetsk	WBC
Donetsk National University	Donetsk	WBC
Mykhailo Tugan-Baranovsky Donetsk State University of Economics and Trade	Donetsk	WBC
Donetsk Entrepreneurship Institute	Donetsk	WBC
Carpathian Entrepreneurship Institute within the Ukraine Open International Human Development University	Uzhgorod	WBC
Uzhhorod National University	Uzhgorod	WBC
Zakarpattia State University	Uzhgorod	WBC
Chernihiv State University of Technology	Chernihiv	WBC
Chernihiv State Institute of Economics and Management	Chernihiv	WBC
ChernihivCivilProjectReconstruction Research and Design Institute	Chernihiv	WBC
National Tavrida university named after Vernadskiy, Faculty of Geography	Simferopol	Contacted / low interest
Institute of regional studies	Lviv	Contacted / low interest
Lviv National University (Lviv)	Lviv	Contacted / low interest
Lviv Technical University 'Lvivska Politehcnika" (Lviv)	Lviv	Contacted / low interest
National institute of Oil and Gas (Lviv)	Lviv	Contacted / low interest
NGOs and activists		
Foundation for the Development of Environmental and Energy Markets	Kyiv	Contacted / interest
Ukraine Wind Energy Association	Kyiv	Contacted / high interest
OJSC Association UkrHydroEnergo	Kyiv	Contacted / high interest
All-Ukrainian Environmental Public organization "MAMA-86"	Kyiv	Contacted / low interest
All-Ukrainian Ecological League	Kyiv	Contacted / no interest
Scientific and technical union of the energy production and electrical equipment professionals of Ukraine	Kyiv	Contacted / no interest
National ecological center of Ukraine	Kyiv	Contacted / high interest

Stakeholder group	Region	Interest identified/Feedback provided at the scoping stage
Greenpeace Ukraine	Kyiv	Phoned / no interest
Zelenyi Svit / Friends of the Earth Ukraine	Kyiv	Phoned / no interest
Ukrainian society for the protection of birds / BirdsLife Partner in Ukraine	Kyiv	Contacted / high interest
Ecology and Human Health	Odesa	Phoned / no interest
Fair Odesa Public & Political Movement	Odesa	Phoned / no interest
MAMA-86 Odesa Public Organisation	Odesa	Phoned / no interest
Yuzhne Town Environmental Club	Odesa	Phoned / no interest
Professor Pusanov Wildlife Conservation and Renaissance Foundation "Natural Heritage"	Odesa	Phoned / no interest
Zakarpattia Oblast Young Entrepreneurs' Association	Uzhgorod	WBC
Edelweiss Environmental Club	Uzhgorod	WBC
Mukacheve Entrepreneurs' Association	Uzhgorod	WBC
Green World Chernihiv City Environmental Association	Chernihiv	WBC
Chernihiv Business Centre	Chernihiv	WBC
NGO Ecology and World	Simferopol	Contacted / high interest
Environment People Law (formerly Ecopravo-Lviv)	Simferopol	Contacted / high interest
Resource& Analysis Center "Society and Environment"	Simferopol	Contacted / interest
International development organizations		
United Nations Development Program		Phoned / low interest
USAID		Phoned / low interest
SIDA (Swedish International Development Agency)		Phoned / low interest
Regional stakeholders		
Affected communities (TBI later)		WBC at later stages
Energy consumers producers (TBI later)		WBC at later stages
General public in target regions (TBI)		WBC at later stages
Other regions		
Wildlife Conservation		WBC
Ornithology station		WBC
Institute of the problems of nature use and ecology		WBC
Oblenergo in key regions		WBC
Institute of the problems of market and environmental economics research		WBC
Mass Media		
Narional newspapers: "Segodnya"; "Delo"		WBC
Regional newspapers:		WBC
"Odesa Daily", "Odesky Vistnyk"	Odesa	WBC
"Crymskie Izvestia", "Crymskaya Pravda"	Crymea	WBC
"Vysoky Zamok". "Lvivskaya Gazeta"	Lviv	WBC
"Uzhgorod", "Nydilya"	Uzhgorod	WBC

APPENDIX B – GRIEVANCE AND COMPLAINTS FORM

FORM FOR COMPLAINTS OF INDIVIDUALS

Reference No:	**[USELF to complete]**
Full Name	
Contact Information and Preferred method of communication Please mark how you wish to be contacted (mail, telephone, e-mail).	☐ **By Post: Please provide mailing address:** _____ _____ _____ ☐ **By Telephone:** _____ ☐ **By E-mail** _____
Description of Grievance:	
What would you like to see happen to resolve the problem?	

Signature: _____

Date: _____

Please return this form to: Mr. Ivan Maximov, Black & Veatch Moscow
Telephone: +7 (495) 232-67-38, Fax: +7 (495) 232-6739; email: maximovi@bv.com;
P**ostal address:** Russia, 109147, Moscow, MosAlarko Plaza One, Marksistskaya street 16

APPENDIX C – TIMETABLE FOR USELF SER REPORT PUBLIC DISCLOSURE AND CONSULTATION MEETINGS

TIMETABLE FOR USELF SER REPORT PUBLIC DISCLOSURE AND CONSULTATION MEETINGS				
City	**Activities**	**Address**	**Dates**	**Time**
Zaporizhzhya	USELF SER stakeholder meeting	Exhibition Center "Kozak-Plaza", Pobedy Str., 2 floor, Small Hall	14.03.12	(registration at 11:30) 12:00-16:00
Donetsk	USELF SER stakeholder meeting	Shakhtar Plaza, GermanaTitova Ave., 15	15.03.12	(registration at 9:30) 10:00-14:00
Simferopol'	USELF SER stakeholder meeting	Hotel "Zvezdnaya", conference hall, M.ZalkiStr, 17-b	16.03.12	(registration at 9:30) 10:00-14:00
Kyiv	USELF SER stakeholder meeting	Hotel "Tourist", conference hall, 2 R. Okipnoi St.,	19.03.12	(registration at 9:30) 10:00-14:00
L'viv	USELF SER NGO meeting	Hotel "Euroset'", conference hall, Tershakovtsev street, 6A.	20.03.12	(registration at 9:30) 10:00-14:00
	Mini-hydro power issue: main public concerns Meeting with NGOs		20.03.12	15.00-17.00

ATTACHMENT D – UPDATED USELF SER PROJECT LEAFLET

Strategic Environmental Review of Renewable Energy for Ukraine

Strategic Environmental Review of Renewable Energy for Ukraine

To help Ukraine realise its renewable energy potential, the European Bank for Reconstruction and Development (EBRD) has launched the Ukraine Sustainable Energy Lending Facility (USELF). USELF aims to provide development support and debt finance for renewable energy projects which meet EBRD's commercial, technical and environmental standards.

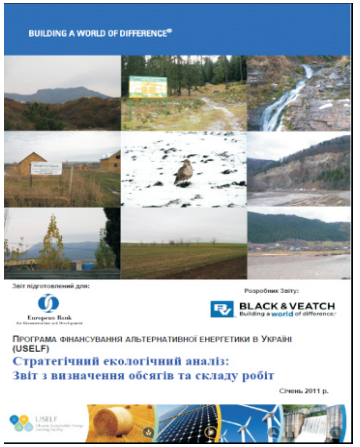
Why carry out a Strategic Environmental Review?

In co-operation with the national authorities in Ukraine, the Ukraine USELF commissioned a Strategic Environmental Review (SER) of renewable energy technologies. The SER focuses on the potential impacts of onshore wind, small hydropower, solar, biomass and biogas in areas of Ukraine that can support the technologies. The SER has been undertaken in collaboration with key stakeholders in the area of renewable energy development in Ukraine, including representatives from ministries, national and local authorities developers, local power utilities, non-governmental organisations and other interested parties.

The purpose of the SER is to identify key environmental issues associated with renewable energy projects and provide a source of environmental and social data relevant to guide and inform later environmental reviews of specific projects. The SER complies with EBRD Environmental and Social Policy and the Public Information Policy, and has been guided by the European Union Strategic Environmental Assessment Directive. The USELF SER represents a key initial step towards effectively and efficiently developing renewable energy projects in Ukraine. The SER uses existing environmental information to define the environmental and social setting in Ukraine that could be impacted by renewable energy development.

What does the Strategic Environmental Review accomplish?

The SER identifies scenarios for the development of solar, onshore wind, biomass, biogas and small hydropower projects in areas where it is technically possible to utilise these resources in Ukraine. These scenarios have also been developed to understand how geography, the existing transmission network, and resource availability might make development in some areas of Ukraine unlikely.



The SER evaluates the potential impacts of renewable energy developments upon environmental resources, communities, and the economy for each scenario in the short and long term. The SER also identifies ways to avoid or reduce those impacts to acceptable levels and to help achieve sustainable development objectives.

The SER will not affect the need to prepare an EIA (ONNS) for each project, but will provide information to developers, authorities and EBRD and allow them to focus their efforts on key issues.

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How does the SER help the future development of renewable power?

The SER does not make an assessment of the impacts that are relevant to any single project, as the environmental issues and impacts associated with that project will be mostly dependent on the specific location and nature of the development site. However, the SER will help to streamline the impacts assessment process by making it easier to identify and avoid or reduce environmental impacts. . This will help developers to meet Ukraine permitting requirements and demonstrate compliance with the EBRD Environment and Social Policy, and help streamline the EIA review process allowing the EBRD to finance specific projects through USELF.

The SER team has contributed to a Developer's Manual and a series of document templates which will help funding applicants (developers) to demonstrate how they have considered and addressed the potential impacts associated with individual projects.

This will allow EBRD and stakeholders to be confident that applicants have considered the environment and are taking the right steps to develop sustainable renewable energy schemes.

How does the SER take into account the views of Stakeholders?

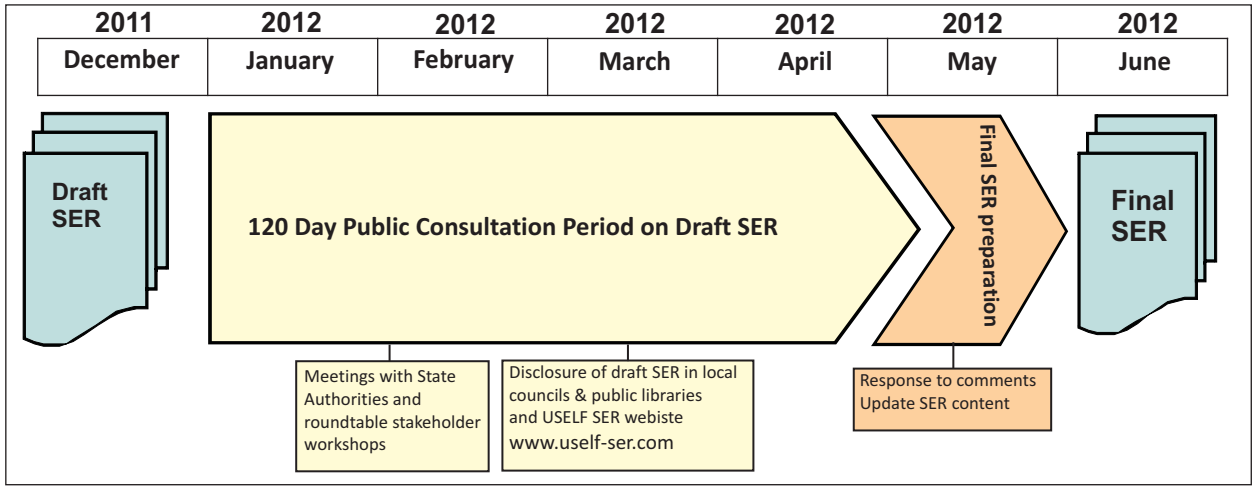
USELF developed a Stakeholder Engagement Plan (SEP) guide consultations and communication with olders throughout the SER process. To inform the ion of the SER, the SER team consulted with a wide range of stakeholder groups and conducted meetings with 51 stakeholder groups during the scoping stage (details of which are provided in the SEP).

The SER also provides a streamlined process of stakeholder engagement for individual projects to ensure that communication with stakeholders meet the requirements of Ukraine law and EBRD.

The Draft SER Environmental Report has been Jack's insert here but are we sending this out before or to coincide with the start of consultation process?made availble to the public for a 120-day consultation period, during which time stakeholders have the opportunity to review and comment on the findings of the SER. The Draft SER Environmental Report will be made available to stakeholders at **http://www.uself-ser.com** and at local councils and libraries. There will also be a series of workshops and public meetings at locations across the country, where stakeholders can share their views and comments on the SER.

The feedback received during the consultation period will be reviewed and incorporated, where appropriate, in the final SER.

Programme for public consultation on the draft SER



Project Development Support

- A related but separate effort of Ukraine Sustainable Energy Lending Facility

- Renewable energy project development support is available through a Project Support Team based in Kiev.

- The Project Support Team screens projects applying for funding by USELF, and assists developers with applications for USELF financing.

- The Bank will provide developers with the support they need to finance and permit projects in Ukraine, while at the same time, ensuring theinformation required for the Bank's due diligenceis prepared in a thorough and consistent way foreach project.

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Strategic Environmental Review of Renewable Energy for Ukraine

Стратегічний екологічний аналіз розвитку альтернативної енергетики в Україні

Для того, щоб допомогти Україні реалізувати її потенціал в галузі альтернативної енергетики, Європейський Банк Реконструкції та Розвитку (ЄБРР) започаткував Програму фінансування альтернативної енергетики в Україні (USELF).

Метою Програми USELF є технічна підтримка та кредитне фінансування проектів розвитку відновлюваної енергетики, що відповідають необхідним комерційним, технічним та екологічним стандартам.

Для чого проводиться Стратегічний екологічний аналіз?

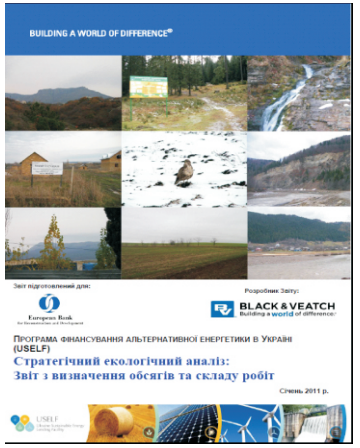
Спільно з відповідними органами державної влади України, керівництво Програми USELF організувало проведення Стратегічного екологічного аналізу (СЕА) з метою визначення оптимальних технологій відновлюваної енергетики. СЕА спрямований на вивчення потенційних впливів вітрових електростанцій наземного базування, малих гідроелектростанцій, сонячних електростанцій, електростанцій на біомасі і біогазі в тих районах України, які мають відповідні умови для розвитку цих об'єктів. СЕА виконувався у співпраці з ключовими зацікавленими сторонами в сфері розвитку відновлюваної енергетики в Україні, включаючи представників міністерств, національних і місцевих органів влади, розробників проектів, місцевих енергетичних служб, неурядових організацій та інших зацікавлених сторін.

Метою СЕА є визначення ключових екологічних проблем, пов'язаних з проектами в галузі відновлюваної енергетики, і формування необхідної бази екологічних і соціальних даних, необхідних для методичного і інформаційного забезпечення майбутніх досліджень з екологічної оцінки конкретних проектів в галузі відновлюваної енергетики. Процес СЕА проводився у відповідності до вимог Екологічної та соціальної політики і Інформаційної політики ЄБРР, а також згідно з положеннями Директиви Європейського Союзу про стратегічну екологічну оцінку. Стратегічний екологічний аналіз Програми USELF є основним початковим етапом процесу розробки результативних та ефективних проектів розвитку альтернативної енергетики в Україні.

В матеріалах СЕА використовується наявна інформація про існуючу екологічну і соціальну ситуацію в Україні, яка може зазнати впливу в процесі розвитку відновлюваної енергетики.

Які завдання виконуються в рамках Стратегічного екологічного аналізу?

В рамках Стратегічного екологічного аналізу визначаються сценарії реалізації проектів з будівництва сонячних електростанцій, вітрових електростанцій наземного базування, електростанцій на біомасі і біогазі, а також малих гідроелектростанцій в районах, які мають відповідні технічні умови для використання цих ресурсів в Україні. Ці сценарії також були розроблені для того, щоб зрозуміти, яким чином місцеві географічні умови, стан існуючої енергопостачальної мережі і наявність ресурсів можуть зробити розвиток об'єктів відновлюваної енергетики практично неможливим.



СЕА оцінює потенційні короткострокові і довгострокові впливи проектів в галузі альтернативної енергетики на природні ресурси, населення та економіку за кожним з визначених сценаріїв. СЕА визначає шляхи уникнення або скорочення цих впливів до прийнятних рівнів, а також можливості для сприяння досягненню цілей сталого розвитку.

Процес СЕА не впливає не необхідність підготовки матеріалів з ОВНС для кожного проекту, а має на меті надати необхідну інформацію для розробників проектів, відповідних органів влади і ЄБРР, яка дасть можливість зосередити зусилля на вивченні ключових питань.

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Яким чином СЕА сприятиме майбутньому розвиткові відновлюваної енергетики?

СЕА не має на меті виконання оцінки впливів індивідуальних проектів, оскільки екологічні питання і впливи, пов'язані з кожним окремим проектом, переважно залежатимуть від місця розташування і характеру конкретного проектного майданчику. При цьому матеріали СЕА дозволять оптимізувати процес оцінки впливів шляхом забезпечення необхідної інформаційно-методичної бази для визначення, уникнення або скорочення впливів на навколишнє середовище. Це допоможе розробникам проектів забезпечити дотримання вимог українських дозвільних процедур і продемонструвати відповідність до положень Екологічної і соціальної політики ЄБРР, а також оптимізувати процес розгляду матеріалів ОВНС таким чином, щоб ЄБРР мав можливість фінансувати конкретні проекти в рамках Програми USELF.

Група з СЕА взяла участь в підготовці Посібника для розробників проектів і комплекті форм документів, які допоможуть заявникам (розробникам) проектів, що пропонуються до фінансування, продемонструвати те, що потенційні впливи, пов'язані з кожним окремим проектом, були належним чином вивчені і враховані.

Таким чином ЄБРР і зацікавлені сторони зможуть переконатись в тому, що заявники проектів розглянули всі екологічні питання і здійснюють належні кроки в напрямку розвитку екологічно невиснажливих енергетичних об'єктів.

Яким чином думки зацікавлених сторін враховуються в процесі СЕА?

В рамках Програми USELF був розроблений План залучення зацікавлених сторін (ПЗЗС), який визначає засоби і форму консультацій і комунікацій із зацікавленими сторонами в процесі СЕА. Для того, щоб забезпечити необхідну інф ормаційну базу для підготовки СЕА, група експертів з СЕА проводила консультації із широким колом зацікавлених сторін, включаючи зустрічі з представниками 51 зацікавленої організації на стадії визначення складу та обсягу робіт із СЕА (детальна інформація про ці зацікавлені організації міститься в матеріалах СЕА).

СЕА також визначає удосконалений процес залучення зацікавлених сторін до обговорення конкретних проектів, який дасть можливість здійснювати комунікації із зацікавленими сторонами у відповідності до вимог українського законодавства і ЄБРР.

Проект Екологічного звіту в рамках СЕА буде наданий для громадського обговорення, яке триватиме протягом 120-денного періоду консультацій, під час якого зацікавлені сторони матимуть можливість розглянути і прокоментувати висновки СЕА. Проект Екологічного звіту з СЕА буде доступним для зацікавлених сторін на сайті http://www.uself-ser.com, а також у приміщеннях місцевих рад і бібліотек. Також передбачається проведення серії семінарів і зустрічей з громадськістю в різних регіонах країни, під час яких зацікавлені сторони зможуть поділитись своїми думками і надати свої коментарі щодо матеріалів СЕА.

Коментарі і зауваження, отримані під час періоду консультацій, будуть належним чином враховані в остаточному варіанті Звіту з СЕА.

Програма громадських консультацій з обговорення проекту Звіту з СЕА

Підтримка розробки проектів

- Суміжний, але окремий напрямок діяльності в рамках Програми фінансування альтернативної енергетики в Україні

- Підтримка з розробки проектів в галузі відновлюваної енергетики надається Групою підтримки проектів, яка базується у Києві.

- Група підтримки проектів виконує первинній відбір проектів та працює із розробниками над заявками на отримання фінансування в рамках Програми USELF.

- Банк надаватиме розробникам проектів підтримку, потрібну для отримання фінансування і проходження дозвільних процедур в Україні,одночасно забезпечуючи надання комплексної і узгодженої інформації, необхідної для експертизи проектів на рівні Банку.

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ATTACHMENT E – LIST OF PARTICIPANTS AND MINUTES OF REGIONAL MEETINGS

LIST OF PARTICIPANTS AND MINUTES OF THE STAKEHOLDER MEETING IN ZAPAROZHIA, UKRAINE

14.03.2012

Ukraine Sustainable Energy Lending Facility (USELF)
Strategic Environmental Review

Public Consultation Meeting

List of Participants

1.	Igor Fedotov LTD "Transport Energy regional initiatives"
2.	Broido, Igor Leonidovich Head of Public Administration of Environmental Protection in the Zaporozhye region
3.	Lihasenko Fedor Deputy Chief of Public Administration of Environmental Protection in the Zaporozhye region 061-224-70-28 097-669-55-07
4.	Gennady Dubov, Dubov Konstantin, Sergey Datsenko "Company Granik"
5.	Raisa Simkina Scientific editor of the international Information Technology magazine "Tools and equipment for professionals" 050-300-34-62 057-712-20-40
6.	Alexander S. Petryga Zaporizhzhya Regional Centre for Investment and Development
7.	Vita Stoyanovskaya. Manager of LLC "Alva-Star"
8.	Oleg Shirokikh Deputy Director of "Dneprohimservis"
9.	Gregory Mazur (CEO), Vladislav Kirichuk (technical director) The company MNC Group: Biogas, Microturbines, Certification 067-708-77-58 - Gregory Mazur 067-572-26-02 - Vladislav Kirichuk
10.	Victor Shvigl Director of "Agrohimservis" 067-614-57-73 http://agrohimservice.com.ua/
11.	Alexander Bagin Chairman of the Coordinating Council of the All-Ukrainian environmental movement "Hortitsky Forum", the chairman of the Committee on Ecology of the Public Council for Zaporizhzhya Regional State Administration Khort_rec@zp.ukrtel.net 095-809-56-06
12.	Roman Zinchenko Jaroslav Volodin, Ltd. "Union Continent" oae@s-konst.com.ua 067-612-26-30

Introduction

14th of March in Zaporizhzhjain Kazak-Palace at 2 p.m. the meeting of the representatives of the USELF Programme and Black & Veatch Company/Ecoline EA Centre with stakeholders took place. There was represented the Review

Agenda

1. Introduction and Welcome - Olena Borysova, EBRD Kyiv and Valentin Didyk, USELF Representative USELF
2. Strategic Environmental Review: approach and main findings M. Clegg Black & Veatch, UK
3. Public Consultations Process to Discuss the USELF Strategic Environmental Review - Ivan Maximov, Black & Veatch Russia and M.V. Khotuleva, Ecoline EA Centre
4. Legal and Methodological Framework for the Strategic Environmental Assessment in Ukraine. Potential for Development and Practical Application - Ye.V. Khlobystov, Dr. (Economics), Advisor, Ecoline EA Centre / Black & Veatch
5. Open discussion: comments and suggestions from participants. Moderator: M.V. Khotuleva, Ecoline EA Centre

Minutes of meeting

Beginning: Workshop organizers and moderators held an informal conversation with MrBroide, MrLihasenko,Mr Fedotov andMr Dubov. Mr Broide, M rLihasenko wondered, whether programs on the table (e.g., miniHPP and wind turbines) be implemented: "We represent the regional agency of Ukraine's Natural Resources Ministry, therefore, we would you to tell us how you plan to work with local authorities."

MsKhotulevaWe are interested in Kherson region in Southern Ukraine, as the region has a significant potential of wind energy.

The informal conversation was followed by the presentation Matthew Clegg from Black & Veatch on the Strategic ecological analysis(SEA) aimed at developing Ukraine's green energy

MrBroideHave you defined specific places for miniHPP alongside the Dnieper river?

MsKhotulevaNot at this stage of analysis, since Ukraine's hydroelectric sector is highly developed and the Dnieper river has been tapped. Thus, we have focused on the Dniester and Tysa rivers.

MrBroide You are quite right. Ukraine's Water Resources Committee also considers the Dniester, Tysa as well as the Southern and the Western Buh rivers to be potential locations for miniHPPs, with the Dnieper river being unpromising due to the existing cascade of large-scale HPPs. Therefore, we see no need to build miniHPPs on this water artery.

MrLihasenkoHave you considered the possibility of using waste water residue as a biofuel, since biomass elements estimate up to 45-48 per cent of waster water volume. Together with Andria Co., we have carried out feasibility study on utilizing waste water residueas a biofuel.

MsKhotulevaWe have not considered this opportunity, although, waste water residue is not subject to 'green tariff'.

MrBroide Is biogas subject to 'green tariff'?

Ms O. Borisova: We hope that Ukraine's government will address this issue. Note that the project on agenda can be used as a pattern by central ad local authoritiesto plan green energy development. The given SEA makes it possible to harmonize different environment protection control and pollution reduction methods applied by numerous industries.

MrBroideThis aspect of SEA is of tremendous importance for this city, as the issue of ecological policy harmonization in Zaporozhye has been high on agenda for the past 2 decades:he city has an industrial park which includes 12 manufacturing facilities that cannot work properly because of the lack of umbrella ecological planning program. The mechanism of harmonizing ecological policies of the local manufacturing enterprises is missing.

MsKhotulevaEcological policy harmonization is one of the UE top priorities and is currently implemented, e.g., target analysis is applied as one of the methods of carrying out SEA.

MrBroide There is always something to look at in the EU; in Ukraine, however, the issue of harmonization is connected to the legislation. I would like you to inform us about your project implementation in Ukraine.

Ms O. Borisova The ecologic study of Bahchisaray district, the Autonomous Republic of the Crimea, has been carried out under the auspices of UNDP as a part of 'Bahchisaray, Green Paradize' local program.

MrBroide and MrLihasenko have positively assessed the SEA conducted in Bahchisaray and proposed the companies carrying out the SEA in Bahchisaray to send them their comments on the work conducted; they also made remarks regarding the content of the web-site on SEA.

Ms Khotuleva:I would like to stress that, recently, the dialogue with the authorities have improved, since we have begun talking to them in 'economic language'; it has been the key to success. Wehavealreadyfruitfulexperience. We have carried out SEA in one of the Russian Federation regions; in the beginning, it was difficult to find common ground but once have begun speaking 'economic language', the work went much smoother, with the regional project demonstrating significant results already in a 3-year period.

MrBroideThat is why, we are not in equal conditions, for you already have the experience of fruitful work, whereas we have not. For that reason, I believe we need to study your experience first.

MrLihasenkoWe need to study the information received to define our place in the activity, and what are we required to undertake. Once we have thoroughly analyzed your report, we will be able to voice clear-cut comments.

MsKhotulevaand**MrMaximov**: We would very grateful if you submit your comments on the handouts received.

Ms Khotuleva*:* We need to save in the knowledge that regular events as well as cooperation with banking and financial institutions, not to mention EBRD, are essential for successful project implementation.

MrBroide: It is true that collaboration with banking and financial institutions together with the organization of scheduled events is the key to success provided initiatives are introduced. Though, there is a certain degree of probability that initiatives put on the table by local authorities may not be welcomed in branch industries, as it sadly often happens.

MrLihasenko: Can we combine one of our potential programs with SEA carrying out? Thisyear, wearelaunchingalong-termecologicalprogramuntil 2020. We plan to organize a bid among potential partners, and offer you to participate in the bid. Ukraine's government is

seriously intended to carry out ecological reform, with the reform funds partially allocated from the government coffers being a stimulus for you.

Mr Clegg: EAC and Black & Veatch are ready to provide commensurate assistance and will consider your proposals. We have a question: what do you see as obstacles for mini hydroelectric industry development in Ukraine?

MrBroide: I believe the main obstacle is the lack of geologic and economic assessment of miniHPPs and wind turbines, which can eventually lead to serious outcomes.

Ms Khotuleva*:* Should we take Zaporozhye region, what outcome there can be?

MrLihasenko: A conflict with local population because of miniHPP location. I want to reiterate, however, that Zaporozhye region has no potential to develop mini HPPs.

MrBroide: We can discuss the potential of wind power. Here, however, we face a problem of land shared between numerous owners; we can build wind turbines in tree belt areas but it will lead to chopping-off thousands of trees, which eventually would lead to disastrous repercussions for farmlands. Moreover, one need to keep in mind birds' migration routes because it can lead to wind turbine failure.

Ms Khotuleva*:* We are confident that that land reform planned will resolve this problem, and allow the alternative energy (wind energy, in particular) companies to realize the potential of Zaporozhye region. Whichdistrictshavethispotential?

MrLihasenko: These are Priazovsky and Akimovsky districts, with wind turbines having begun constructed after preliminary ecological assessment. Generally speaking,ecological assessment used to be carried out systematically in the USSR, with only occasional assessments carried out at present moment. E.g., Zaporozhyemunicipalitygivesusahelpinghand, butitcannotaddressalltheissues, sincealotofthemarebeyonditsauthorities. Nevertheless, there are attempts to make ecological assessments be systematic, e.g., Zaporozhye Regional State Administration has established agencies in charge of various energy industry sectors, with one of the agencies responsible for wind energy.

MsKhotuleva and **MsBorisova** proposed to discuss the principles of USELF activity with all the potential investors, however workshop participants pointed out that the information received needed studying and analyzing

MrBroideMrLihasenkohave left the workshop, with stakeholders joining it. Mr Mazur kindly requested Mr Clegg from Black & Veatch to focus once againon using biomass and biogas as green energy resources, with the discussion shifting into the sphere of biomass and biogas utilization.

Mr Clegg (Presentation)

MrMaximov (Presentation)

Mr Mazur: When speaking about biogas production, one element is constantly omitted, which is ammonium water, biogas production residue. The companies offering biogas-producing equipment do not provide machinery for biogas production residue recycling, with swollen prices being the reason for it. Turning a blind eye at the necessity of recycling ammonium water as a toxic waste can lead to ecological catastrophe.
As an example, Mr Mazur informed the workshop participants about a large-scale (50-thousand-bird) chicken farm in Khmelnitsky region, and underlined that more that 3.5 thousand metric tons ammonium water contaminates the soil because of biomass dumped,

with harmful agents concentration being 0.011 mg/L, which is much higher than norm. Therefore, MTC Group, the company Mr Mazur represents, is ready to provide the equipment to recycle ammonium water. It would prevent the Dniester river pollution on the territory from the town of Kamenets-Podolsky to the city of Odessa which is the Black Sea resort.
Speaking about biogas, Mr Mazur added that ecological issues are not addressed at all when utilizing biogas stations. Mr Mazur pointed out that unfortunately Ukraine can boast only several biogas stations, with Germany being pride of 5,000. He also said that biogas would become high on Ukraine's energy market agenda; however, theoretic surveys were to be carried out based on practical assessments with regard to the impact of biogas production residue on the environment.

MsKhotuleva*and***MsBorisova***:* You are absolutely right. Saving in the knowledge the harmful impact of ammonium water,practical assessments are to be carried out by special agencies to prevent environment pollution. It is these specific cases the SEA on the table has been carried out for; it can be applied by all the stakeholders in particular regions.

According to **Mr Mazur**, western companies are trying to enter Ukraine's biogas technology market, but they are offering technologies implemented 2-3 decades ago. One thing should be clarified: the technologies on agenda did not consider the liquid fraction as the biogas production residue which pollutes the environment if dumped together with solid one (harmful agents content in liquid fraction is 11,000 mg/L). Henceforth, with Ukraine being the world's second produces of chicken meat and eggs, as well as one of world's to ten pork produces, ecological assessments as part of green energy resources production must be one of top-priority issues.

Returning to the workshop topic, Mr Mazur suggested that the existing international programs, such as USELF и IFA should agree on harmonizing financing instruments; it would allow Ukraine to carry out ecological rehabilitation within a 5-year period.

Mr Mazur also wandered whether EBRD considered biogas production projects as infrastructural ones that would be successfully implemented in 5 years, or as ecological ones.

MsBorisova*:* USELF supports all the projects subject to 'green tariff'. Once biogas has been subject to 'green tariff', we will allocate credits for biogas production. We are engaged in commercial projectfinancing and technical assistance.

Mr Mazur*:* The problems of Ukraine's biogas producers are not limited by technology alone: should an alternative energy company plan to enter the national energy market, it needs integrating into national energy grid and to regional energy distribution systems (oblenergos), and this is where uncoverable breaches of bureaucratic nature appear. It is sad but Ukraine's energy legislation has been worked out basically for one political and economic power group.

MsBorisova*:* We are collaborating closely with Ukraine's National Energy Regulating Committee to tackle this issue you have mentioned, with collaboration goal being to get the officials acquainted with energy industry issues, since they demonstrate a very poor competence in this area. As for the alternative energy company, we can provide technical consulting services when carrying out feasibility study. This part of work is conducted by our consultants.

Mr Mazur*:* How can one become your consultant?

MsBorisova*:* By winning the bid. I would like, however, to get back to the issues of environment protection and ecological project implementation. As a part of the SEA presented,we have worked out the criteria of assessing the impact on environment, with the criteria related directly to Ukraine's current restrictions defined during SEA carrying out. Thecriteriarepresenttheresultsof 12-monthsurvey.We plan to work out a manual for potential

investors in the near future as a part of USELF program, with the criteria mentioned added as annexes.

Mr Mazur*:* What steps does EBRD plan to undertake if the project is appeared to be non-profitable after the credit has been disbursed and returned?

MsBorisova*:* Should the credit be returned in due time and be non-profitable, it is only a part of the company's credit record. We monitor only large-scale projects, e.g., the ones implemented at huge manufacturing facilities, since these projects have to deal with social responsibility, not only with ecological issues.

Mr Mazur*:* You can suggest the mechanism as follows: the client submits annual report to EBRD on the project status, and it makes no difference, whether EBRD monitors the project or not.

MsBorisovaYou are absolutely right. Credit obtaining from EBRD is a transparent procedure, therefore, the bank is ready to receive complaints on borrower's not meeting ecological requirements.

Mr Petriga: Have you considered the need for returning organic elements in soil when conducing ecological monitoring?
Mr Petriga has informed the audience that the percentage of humus return in soil has dropped to 2.5 % from 4.5 % in Zaporozhye regionbecause of biomass [cattle breading and straw] utilized as energy source. it lead to another question: Has USELF proposed to use biogas or wind energy instead of biomass?

MsKhotuleva:I have noticed that some questions are strategic level oriented, with others being project level oriented. There is, however, a group of questions being at the cross-road, i.e., between a strategic level and a project one, with your question belonging to this very group. Unfortunately, we cannot address a project from national-level perspective; nevertheless, its impact on the environment shall be specified in each and every the case.

Mr Petriga: These steps need undertaking precisely from national-level perspective, since soil depletion has already lead to desert advancing in some areas in Zaporozhye region, which does not typical for regional climate conditions.Company CEOs ignore scientists' warnings, which at the end of the day will lead to EBRD sanctions. Moreover, we can state that local companies' activity it terms of submitting for credits has shrinken, as many funds conceal the presence of interest rate to be paid.

Ms Khotuleva: Unfortunately, we cannot address all the issues put on agenda with the help of the SEA of only one program. Ukraine is to ratify SEA protocol; otherwise the EU introduces sanctions against your country for violation ecological norms. We can suggest the following: we can demand SEA of a particular program to be conducted prior to allocating funds; in this case, one can raise the issue that biomass should not be utilized as biofuel only.

Mr Petriga: Then I suggest you recommend clear-cut steps as experts in this sphere.

Mr Mazur: Can one apply for participating in your credit program if natural gas is substituted with biogas?

MsBorisova*:* Yes and no; yes, because we are talking about 'green tariff', and no, because for this purposethere is a special program, UKEEP, aimed at allocating funds for energy saving and energy efficient projects.

Mr Mazur*:* I would like to get back to the issue of energy companies collaboration with regional energy distribution systems (oblenergos). I suggest the following: you address

Ukraine's National Energy Regulating Committee, with the commission giving decrees to oblenergos.

MsBorisova*:* Yes, connecting to Ukraine's national energy grid is indeed a problem, though, as you know, green energy is a part of the Presidential economy modernization program, therefore, you can refer to the program as to the final tool for argumentation.

Ms Khotuleva*:* I would like to add that, at times, USELF cannot find the particular solution alone saving in the knowledge the scale of alternative energy market; thus, we welcome you to collaborate with us.

Mr Mazur*:* Then my suggestion is that we should carry out a joint case study with USELF and Black & Veatch of the organic elements reduction in soil because of massive utilization of biomass as an energy source.

MrMaximov: It is a very appealing idea. In return I would like to point out that EBRD requirements include development strategy and ecological assessment, therefore, the case study similar to the one proposed shall be the integral part of borrower's application. We are now on the final stage of consulting process which ends on 15 May, 2012, with the process duration being 120 days. We hope to attract as many stakeholders as possible. Thus, we welcome you to analyze the results of our work for the past 6 months. We expect you to send us your comments, e.g., on changes that you believe can be introduced on the strategic level.

Mr Didyk: We are looking forward to receiving your expert comments on our work conducted.

Ms Khotuleva*:* Dear participants of our seminars! Thank you very much indeed for your active participation. We highly appreciate your expert viewpoint, and expect your profound recalls on the information you have received during the workshop and in the handout presented. Once again, thank you very much for your deep and intensed interest. Thisworkshopisclosed.

List of Participants and Minutes of the stakeholder meeting in Donetsk, Ukraine

15.03.2012

Ukraine Sustainable Energy Lending Facility (USELF)
Strategic Environmental Review

Public Consultation Meeting

List of Participants

15 March 2012, 10-00

Shakhtar Plaza Hotel
Conference Hall
15 Titov Street
Donetsk

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30.	Oleg Ivanovich Shuliev	Director, Eastern Fuel Company (biofuel)	(050) 474-37-80

Introduction

15thofMarchinDoneckinShakhtar Plaza Conference Hall at 10 a.m. themeetingof the representatives of the USELF Programme and Black & Veatch Company / Ecoline EA Centre with stakeholders took place. There was represented the Review

Agenda

1. Introduction and Welcome – Olena Borysova, EBRD Kyiv**,** Valentin Didyk, USELF Representative and Donetsk Oblast State Administration representative
2. USELF Strategic Environmental Review: approach and main findings M. KleggBlack & Veatch, UK
3. Public Consultations Process to Discuss the USELF Strategic Environmental Review - Ivan Maximov, Black & Veatch Russia and M.V. Khotuleva, Ecoline EA Centre
4. Legal and Methodological Framework for the Strategic Environmental Assessment in Ukraine. Potential for Development and Practical Application - Ye.V. Khlobystov, Dr. (Economics), Advisor, Ecoline EA Centre / Black & Veatch
5. Open discussion: comments and suggestions from participants. Moderator: M.V. Khotuleva, Ecoline EA Centre

Minutes of meeting

Introduction and greetings from the representatives of EBRD, USELF and Donetsk Oblast State Administration

Yu. Chikunova Energy efficiency and renewable energy issues have been in focus in Donetsk Oblast for the past few years, and considerable efforts have been made to promote renewable energy and assess regional potential. Every year we have a large number of training activities on alternative energy sources for various target audiences (public officers, state-owned industry specialists, industry managers and specialists).We hold the Energy Saving Week every year at the start of heating season, workshops, roundtable meetings, conferences, thematic kid's art contests etc. The adoption of the 2010-2015 Regional Energy Saving Programme was a significant achievement in this area because it includes important energy efficiency and energy saving projects and actions. Wind energy, expansion and upgrade of existing wind parks, launch of new parks, utilization of mine water and methane, CHPs at coal industries (Zasiadko Mine, Pokrovsky Mine) heat pumps, biomass, solar collectors, modernization o industrial processes and new technologies designed to reduce GHG emissions – all these things are in place and work in the region. This meeting is very important because environmental issues are particularly crucial in our very resource-intensive region…

O. Borysova Information about the European Bank for Reconstruction and Development as an international financing institution supporting projects in 29 countries, from the Central Europe to the Central Asia. The Bank primarily supports private sector, entrepreneurship and transition to market economy. This Strategic Environmental Review of Ukraine Sustainable Energy Lending Facility is a pilot project financed by the Bank. The main objective of the USELF Programme is identifying priorities for ensuring the formulation and implementation of balanced renewable energy policy in Ukraine.

V. Didyk In 2010, EBRD launched the Ukraine Sustainable Energy Lending Facility (USELF) whose total budget is 50 million Euro in order to support renewable energy projects involving the use of renewable energy sources for electricity generation. Additional funding (20 million Euro) has been provided for USELF by the Clean Technology Fund.
USELF supports renewable energy projects initiated by private enterprises (small hydro, wind, solar, biomass and biogas).

M. Clegg (Presentation).

Iv. Maximov (Presentation).

E. Khlobystov (Presentation)

Discussion:

R.Kishkan There is difference between the environmental impact assessment (EIA) and environmental review processes. SEA tools are very important for Donetsk and we have to consider how they can be adapted to the city level… It is important to ensure that these tools are used. There are gaps in legislation, but we have to support these instruments and utilize them. There are many important projects, from the development of recreational areas to expansion of ecological networks in the region, but appropriate regulations are sometimes lacking. We need to have these regulations to support our nature conservation activities.

J.Chikunova Regarding the strategic planning at the national level – it might be inappropriate to say this, but unfortunately there are no any real mutually coordinated strategies. Some existing developments at the regional level mainly relate to individual projects on wind energy, solar collectors, cogeneration, coal mine methane, Kyoto Protocol activities, biomass and biogas projects…But all these projects exist on there own and not coordinated with each other.
There is little or no coordination between regions and municipalities, and there is currently no national strategy underpinned by a local level. It is difficult to figure out what is going on. Unfortunately, we have no coherent system integrating all levels together.Sometimes we launch projects and don't know properly where will we be in the end. Such environmental studies of global nature are obviously needed. They will help us move in the right direction. We have to assess project impacts at a very early stage, and we need a straightforward system for this. The Strategic Environmental Review presented today gives us a good idea of what direction we have to go. But it will take time to learn how to use these techniques, and we have to do this together.

S. Natrus It appears that strategic environmental assessments are not carried out at the regional level. On the other hand, we have a number of ongoing environmental programmes in Donetsk Oblast, i.e. some strategic planning experience is available. We've adopted and are implementing a regional waste management programme, and almost 1 billion UAH has been allocated this year in the regional budget for environmental protection activities.
In the southern part of Donetsk Oblast, we have solar power (4 sites in Telmanovsky District and 4 sites in another district). For planning purposes, we've divided the Oblast territory into 3 sections–the catchment areas of the Siversky Donets and Dnipro Rivers, Azov Sea and Kalmius River. All environmental actions aim to address the most essential issues, and all available resources are used to resolve a specific issue. Current budget allocations are already sufficient to address at least some of the issues. Many of budget-funded projects have already undergone the environmental review procedure, and we expect that they will bring environmental benefits. Donetsk Oblast is prepared to take up new approaches but we need to have appropriate legislation, it should be enhanced…We have already made considerable progress at the regional level. The work you're presenting here today is really interesting. We will have a look at all documents available on your website, and will try to see what we can use at the regional level. In our turn, we may show you our strategy for you to be able to see what we are trying to do here.

E.Khlobystov Let me make a small comment. The question is not that you don't have a strategy. Each region has a strategy. What we are talking about are SEA tools, and this is a different thing. We are discussing various mechanisms for implementing the national environmental policy, and the strategic environmental assessment is one of them. To be able to move forward, we have to reach consensus, this is the only way we can move forward.

O. Borysova Why SEA can be useful? Of course, there are many different strategies, including waste management, water resources etc. They are mainly based on sectoral principles and also on the 'end-of-pipe' principle … this means that they deal with the pollution or impact that has already occurred. SEA is an instrument that helps us see potential consequences before the start of a project. The strategic environmental assessment aims to identify potential environmental consequences based on a proactive and integrated approach. Before we start to develop alternative energy, we want to see what may happen. SEA is an instrument for preventing an impact. As far as I know, the USELF SER has considered and taken into account all relevant regional programmes. It is quite difficult to present all SER details during one meeting. But we very much hope that SER materials will be useful in your day-to-day work.

M.Khotuleva It is unlikely that you'll find any absolutely new information in the SER Report because it is based on public sources. And it is absolutely normal that you know the problems existing in your region better.
The SER process has a different purpose and, as Olena says, is based on a proactive approach. Apart from identifying potential impacts, it involves the identification of environmental objectives. These objectives can be used to assess your programmes. It also involves other instruments (e.g. GIS instrument presented by Matthew) …Not all SEA instruments can be applied at the project level, because they help identify consequences at the strategic level. But I would like to draw your attention to instruments. Many of them already exist in Ukraine, Russia, Kazakhstan – more in economic sectors, but they can be also used in environmental sector. …SEA can be used to ensure better coordination of environmental and economic objectives. Having identified these objectives at the regional level, we'll be able to analyse our plans and programmes in the context thereof…
We will be able to see how environmental and economic objectives can be coordinated with the help of SEA instruments. Matthew and Ivan will tell us more about this in their presentations…

D. Zakharchenko What sources will be used to fund strategic environmental assessments? Does SEA include instruments for addressing specific problems? We know our problems that exist at the regional level. Only our capabilities and resources are limited to address all of them …

M. Khotuleva: It is a very interesting question. This kind of questions is often asked. Therefore Russia has not signed the SEA Protocol.

D.Zakharchenko We have to start addressing our issues effectively rather than simply say that a river is polluted. There is never enough money… We don't need to talk about existing problems, we all know them and have to localize them first and then start thinking globally.

E. Khlobystov It is not very correct to talk about the lack of money, resources can be mobilized is required… we all know how much money do we have in the Environmental Protection Fund by the end of year!
The Fund releases funding around the 25th of December, it is already too late to use it.
From this year onward, the Environmental Fund will carry forward funds into the next year. The question is about the way these funds are used. We have reserves that can be used to finance various initiatives, we just have to find them. I suggest that we go back to the subject of our discussion.

M. Khotuleva EBRD has a programme supporting alternative energy. As an investor, the Bank has commissioned the strategic assessment of its initiative. Specific projects have not been identified at this stage yet, but strategically the Bank knows what kind of tasks are going to be addressed etc. Through the SER process, the Bank has demonstrated instruments that can be used to prevent and avoid potential effects of proposed projects, and it has its on resources for this. It might be useful to learn from this…

V.Aldoshina I have questions to the Deputy Head of Environmental Protection Department and to the Voda Donbasa Water Utility. I agree with the moderator that we have to integrate economic and environmental interests, but for far I haven't seen that environmental considerations are properly included in the socio-economic development strategies… I think that at this stage there is no strategy combining both economic and environmental aspects at the Oblast and municipality level. I haven't come across this kind of things in my practice as an NGO and audit company. We do energy audits at various industries in Donetsk Oblast, and I must admit that many of these industries (including those that are financed from the state budget) do not pay sufficient attention to environmental issues…. We still have many schools with poor insulation and broken windows; local socio-economic programmes do not have environmental sections. Our children sit in classrooms with poor illumination. What can we say about environment? Where can we find relevant provisions in the programmes? This is a question I'd like to ask…

N.Denisenko As a representative of NGO that has worked many years to promote energy saving, clean energy, cleaner technologies and sustainable development, I'd like to reply to Valentyna that we have developed various strategies as part of various technical assistance projects, and these strategies have never been implemented. The situation is changing gradually. There is, for example, a project implemented in 5 pilot municipalities in the region (Artemivsk, Horlivka, Kramatorsk, Krasnoarmiysk, Makeevka) and involving the development of sustainable socio-economic strategies that take account of environmental considerations. We've recently launched a series of workshops in Horlivka to formulate a strategy for this town, and 'greening' has been declared as one of strategic objectives, because the town is considered as an area of environmental disaster with a legacy of pollution left after large-scale chemical industries. Of course, this is the first step, there are many difficulties, resources are scarce. But some progress has been made. As regards the Environmental Fund, it currently finances the cleanup programme for the Bakhmutka River in Artemivsk (the plan is to restore the river channel and strengthen riverbanks by 2030). This is to illustrate that the attitudes are changing.
Instruments like SEA are more political, they help the country to have appropriate image by maintaining compliance with international requirements. We've never done this kind of things, many people think that they are not needed, and therefore they ask questions ,about money and who is going to pay for this, people just don't see practical benefits. But in practice these programmes will be useful. SER documents will be provided to municipalities for people to read and discuss them. We will do everything what is needed to disseminate these materials and make sure that people can use them. There are many projects, both current and planned, and we have to take all potential consequences into account. It is a priority task for each society to ensure that all environmental aspects are considered as early as possible…

O. Borysova As regards funding, I'm grateful that Marina has mentioned that EBRD has invested in this SER process. Prevention is always cheaper than correcting consequences, and SEA is a preventive instrument. It should be used for strategic planning. If we manage to transfer this instrument – our mission will be completed. And one small remark, estimates show that SEA would add not more than 10% to the total cost of strategic planning. By increasing your strategic planning budget by 10%, you'll make huge savings in the longer term …

G.Konstantinov Being a thermal energy engineer, I'm a little bit conservative. Alternative energy is first and foremost a competitor to traditional energy. On one hand, it's a drop in the sea. Potential capacity estimates presented here are very small, being similar to those of a medium-size TPP. We want to combine renewable energy and thermal energy, and we assess risks. Who assesses risks associated with competition? For example, we can't set the Green Tariff factor for electricity generated from biomass. Looks like somebody does not want to have it set. It appears that 1 kWh of electricity generated from renewable sources should cost several times more. Is it fair?..

It seems to me that the bank should pay more attention to traditional sources. In the Eastern Ukraine, in Donetsk Oblast, traditional energy sources are much more widely used than traditional sources. We have natural resource reserves that do not require significant const to utilize them. Therefore it would be more appropriate to consider traditional energy sources and 'secondary' resources like coal mine methane and coal dust, and try minimize emissions from existing enterprises. The Bank could also consider those reserves that have lower calorific value (mine waters etc.)I think that alternative sources in our Donbas region are less efficient…
I would appreciate your comments on this.

V.Didyk Some information on the alternative energy. It is ultimately a socio-economic issue. Is our country prepared to invest today and see the effect in 20-30 years? Will we manage to create, develop, introduce and hand over renewable energy technologies to the next generations?
As an example, the solar energy tariff in Germany has decreased from 43 to 18 to 12 Euro cents per kW…Somebody has to understand that expenditures incurred today will bring gains in the future… The situation in Germany is not that simple. Nuclear power plants have been stopped, and nobody knows if they will resume operations one day. It might be feasible to look at the low cost traditional sources, but I've never come across any justified economic and social solutions. But we seem to be moving toward more developed countries and should therefore follow mainstream trends.

Head, Investment/Innovative Project Financing Directorate, DonetskStal Metallurgical Plant It looks like that our discussion gets heated… We are discussing the USELF Programme that has initiated the SER process. I have experience of working with EBRD and know that Bank's procedures are quite complicated….Apart from loan funding, the Bank should consider providing technical assistance for this kind of projects. EBRD has a well defined set of documents to be prepared by a borrower and highly-qualified specialists; maybe it would be worth to think about modifying lending conditions? EBRD should act as an investor and be more flexible in providing loan funding… Investors are more interested in economic effect, while environment is more to do with social effects…Investors are more interested in immediate gains, but they should be supported by the state or through similar programmes. Otherwise we have a closed circle – to borrow money, we need to prepare a set of documents etc. Maybe, I don't know the details about the amounts of funding. The Programme budget is small, and as I understand, significant proportion is used to finance the strategy. For me, this is similar to the Kyoto Protocol, where various assessments are carried out first, and then an industry benefits as a result of reduced emissions. I think that it would be useful to think about changing the lending procedure….

O. Borysova Thank you for your question. Now some clarifications regarding USELF.EBRD provides extensive consultancy support for the Programme, which is aligned along the following 3 main axes: 1) regulators (to facilitate governmental support for renewable energy), 2) project implementation unit(technical, legal, environmental consultancy support), and3) strategic environmental review. The Bank considers renewable energy as a more sustainable option and provides technical and legal support for small projects… This support is essential for smaller projects. I would like to ask our developers how they deal with the fact that their wind farms might be located along the bird migration routes and how this affects their operations?

EBRD supports market economy, but we are confident that only environmentally sound projects are able to ensure long term sustainability. And investors will benefit from complying with the Bank's requirements...

S.Tretiakov We have to think what kind of strategy can we have for our region? Looking back in history, we have to think why this territory remained unpopulated for a long time? We have little or no local water resources, 80% of our forests is of artificial origin. Donbas has

developed only to meet growing demand for metal and metallurgical plants and mines have therefore emerged. The entire region's economy was geared toward this objective, and the country only cared about profits, paying little or not attention to environmental aspects of this lop-sided development.
It appears that metal, coal and energy at sigh a high cost are no longer needed? We talk about ecology today. Power plants (5 sites) generate 80% of sulphur emissions and a desulphurizing facility are therefore required. So what is more important? Desulphurizing equipment or alternative energy projects? At our metallurgical plants, we need treatment/recovery facilities for coke-oven gas, blast-furnace gas, coal mine methane…One desulphurizing plant would cost 500 million dollars. And we have the Uglegorsky TPP whose capacity is that of 5 DniproGES plants, but only 10% of this capacity is used. The government has not provided answers regarding the industrial strategy. An integrated approach is required. And the environmental strategy has been adopted recently… We say that we aim to reduce our emissions significantly by 2015-2020, but at what expense?
And here comes a question: can EBRD finance a replacement programme because this is also alternative energy? Major industries seem to move away from traditional energy, they look for suitable options, install cogeneration equipment…
A real strategy exists, for example, metallurgists decommission polluting open-hearth furnaces, expired pesticides are removed, emission monitoring technologies are introduced. The search for alternatives to the traditional system continues.
Our region has the following real-life strategy– we have to live where we live, this is our home, and this legacy of pollution is not our fault. And international community should understand this. We have a strategy and are committed to implementing it. Currently, we are decommissioning our open-hearth furnaces, and it has taken 8 years to prepare for this. This is not a simple issue.
Speaking about the sustainability of our region, we know very well that our major polluters are the most viable industries, and they need to implement environmental measures. We don't finance emission reduction measures, we say that this is the responsibility of industries (we are talking about 10-20 major industries). As regards water resources – it is not our fault that our groundwater resources are highly mineralised. Similar problems also exist in Russia. We have developed a programme for the Siversky Donets. An we are prepared to take part in the small HPP development programme…
We are trying to address our issues (the cleanup of the Kalmius, Tor and Bakhmutka Rivers) – there is no mechanism to resolve historically problems. We have to support these projects because we understand that we have to solve our problems ourselves.
If we have a specific programme on alternative energy, we are not saying that we have no money to finance it. The budget of our programme is almost 300 million UAH. This is a significant financial resource. If you want to be our partners – we are prepared to provide it to you to review, to examine real environmental situation in the region that bears the burden of historical pollution, and help us identify those actions that are needed most.
This year, we will host the International Environmental Forum «Environment in Industrial Region» under the motto: Investments in Environment are Key to Territory's Security, where we'll present sustainable development projects for our Oblast. Donetsk is a pioneer in this respect, but other cities will be also involved. You are also invited to present your strategy…

O.Borysova Alternative energy projects are implemented in Donetsk Oblast. How would you assess their environmental effects?

S. Tretiakov: This year, we've prepared 50 alternative energy projects that involve the use of heat pumps, solar panels and wind energy, but this is a more sensible use of available potential rather than alternative. If we have enough sun in Volodarsky District, why not use it? If we have wind, we can use it too. But we also have coal…We can't reject it, but we also have to look at alternatives, first of all from the environmental perspective

O. Borysova We are here to present the SER findings that may be useful for your. At the national level, we've analysed 5 renewable energy development scenarios and potential social

constraints. We would like to hear your comments regarding how the results of this review can be used in your work…
As regards energy efficiency, the Bank has rich experience in this area**…**The present Strategic Environmental Assessment takes account of existing environmental and social conditions in the country. In industrial sector, investment projects often include a grant-funded energy saving component. It is important to ensure an integrated approach encompassing technology, environment and economics.

S. Tretiakov: We are familiar with the Bank requirements, but we think that overall approach should be designed in a manner that ensures that regional specifics are taken into account. I agree that we have to think about consequences and that our projects should integrate technological, environmental and economic considerations…I do not agree that environment is a social issue. Technological risks give rise to economic risks, and I think that technology should go first, followed by environmental and economic considerations.

O.Borysova: Thank you for your understanding

M. Khotuleva We have raised a number of important things here. I would like to reiterate some of them. For example, gaps in strategic planning. We can organize the strategic planning process first and than attach SEA, or vice versa. We have similar experience in Ukraine and Russia. SEA instruments are used at a high national level. We have to think how these instruments can be used in our work. We used to work with very small municipalities where these instruments were used to formulate vision. Matthew Clegg has a presentation on how SEA tools can be used at the regional level.

M. Clegg (Presentation)

Representative of the Donetsk National Academy for Construction and Architecture: How the public is involved in the discussion of specific investment projects? ???

M.Clegg In principle, the procedure depends upon the type of specific project. But generally and similar to SEA, the public is involved from a very early stage. An example from the Western Ukraine: an investor plans to develop a site where a private household is located… how can we address this situation? This is an issue to be addressed at the regional level through SEA.

S. Tretiakov: Were SEA tools used to plan mine closure process in Ruhr, Poland and Wales?

M. Clegg SEA tools are more recent, but I'm certain that if we had these tools at that time, many problems would have been avoided… We can also mention Sheffield where global markets shaped the development of steel-making industry, and the decline in these markets hit local steel works and entire city hard. I'm sure that SEA would have helped the city avoid many of these problems.

M.Khotuleva: Thank you very much. I would like to reiterate that SEA is a new instrument that has seen intensive development over the past 15-20 years. The Bank's policies include a notion of affected communities. If we talk about a sectoral development strategy, there might be no affected parties. Participatory approach is a very important thing and it works well. We discussed strategies, but there are also plans. In this case, we can use those tools that are applied at the project level, but a sectoral strategy requires considering a larger number of factors and its consequences are very difficult to anticipate. Therefore different methods are required…Environmental objectives and goals can be part of a programme from the very beginning or can be formulated separately. What we need to do to ensure that a programme is in line with these objectives? We need a special method. The SEA method has a very limited use in our countries. What I would like to stress is that SEA defines rules and delineates what is possible and what is not. These may be formulated as recommendations. At this level, energy and environmental specialists, local public and activists are will find common language much

easier. This is where the involvement of the public is very important. Confrontation is possible, but it is easier to discuss and agree upon goals and ways to achieve them… And rather than saying that EBRD should do that and that, we as members of the society should be able to discuss our development and environmental objectives and reach a mutually acceptable compromise. The Bank policies comprise case studies, and we can use them. There is huge experience in applying the Bank's requirements in Ukraine, Kazakhstan and Russia. I would like to encourage you to provide your comments on how to ensure that renewable energy projects are implemented to the benefit of local communities and how to attract interest to renewable energy projects in Donetsk Oblast?

O.Borysova: Thank you very much colleagues, we've tried to ensure that this meeting is effective and productive. And we hope that this meeting is only the start. You are welcome to visit our website and contribute your feedback and suggestions!

LIST OF PARTICIPANTS AND MINUTES OF THE STAKEHOLDER MEETING IN SIMFEROPOL, UKRAINE

16.03.2012

Ukraine Sustainable Energy Lending Facility (USELF)
Strategic Environmental Review

Public Consultation Meeting

List of Participants

16 March 2012, 10-00

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Introduction

16th of March in Simferopol in Hotel Zvezdnaja at 10 a.m. the meeting of the representatives of the USELF Programme and Black & Veatch Company / Ecoline EA Centre with stakeholders took place. There was represented the Review

Ukraine's Sustainable Energy Lending Facility Strategic Environmental Review (USELF SER)

Agenda

1. Introduction and Welcome – Olena Borysova, EBRD Kyiv and Valentin Didyk, USELF Representative
2. USELF Strategic Environmental Review: approach and main findings M. Klegg Black & Veatch, UK
3. Public Consultations Process to Discuss the USELF Strategic Environmental Review - Ivan Maximov, Black & Veatch Russia and M.V. Khotuleva, Ecoline EA Centre
4. Legal and Methodological Framework for the Strategic Environmental Assessment in Ukraine. Potential for Development and Practical Application - Ye.V. Khlobystov, Dr. (Economics), Advisor, Ecoline EA Centre / Black & Veatch
5. Open discussion: comments and suggestions from participants. Moderator: M.V. Khotuleva, Ecoline EA Centre

Minutes of meeting

Introduction and greetings from the representatives of EBRD, USELF

Marina Khotuleva. The purpose of our meeting is twofold. First of all, we will discuss the SER findings for the USELF Programme. Second, we will talk about the SEA process in general.

Olena Borysova. We are presenting the SER findings for EBRD's Ukraine's Sustainable Energy Lending Facility. EBRD is a major investor in Ukraine's economy. It supports market economy, market instruments and private investors. We also work with the municipal and regional authorities to support infrastructure projects. The Bank has worked in Ukraine since 1991 and considerably expanded its activities, both in Ukraine and abroad. Examples of EBRD projects in Ukraine include the upgrade of the Kyiv-Chop Motor Road Section as part of preparations for EURO-2012; modernization programme for the Ukrainian Railways Company; and the upgrade of the Yalta Water Utility in the Crimea. The Bank is involved in many various projects. I would like to emphasise that whilst supporting market economy and being a commercial entity, the Bank seeks to ensure that its projects meet strict environmental requirements and are socially acceptable. Energy-related projects are a priority area for the Bank in our countries of operations. According to the Memorandum on Cooperation between EBRD and Ukrainian Government, energy sector is a priority activity area for Ukraine. EBRD's activities in the area of sustainable energy have comprised three phases, and we are currently working on the Phase 3 where the Bank has launched a credit line to support private renewable energy initiatives. These projects differ from those typically funded by the Bank. They are often considered as projects with potentially minor environmental effects. Not all of them are required to undergo the EIA and Environmental Review procedure. The Bank understands that the massive development of alternative energy, use of specific renewable energy sources within one geographic location may cause significant adverse impact, both environmental and social. Therefore the Bank voluntarily applies the SER and SEA instruments. These terms are synonymous in this context. We've successfully used this approach to assess wind energy developments in Bulgaria. We are also using similar approach for our renewable energy projects in the Western Balkans. The USELF's SER is a pilot project in Ukraine and we are therefore interested in discussing with you potential environmental effects of renewable energy in the Crimea which is uniquely positioned to support various types of renewable energy scenarios. In addition and taking into account the fact that Ukraine is about to ratify the SEA Protocol and thus introduce this instrument into practice so that it eventually becomes a

routinely used procedure like our EIA, though much more efficient, we would like to demonstrate how this approach has been applied in our project.

Valentyn Didyk. During the past 4 years, the Bank has examined the potential for utilizing renewable energy resources in Ukraine. The first phase started in 2008 and was used to evaluate available resources. The second phase in 2009 focused on the identification of specific projects. The USELF Programme was launched in October 2010 to facilitate the identification and preparation of bankable projects that can be funded by EBRD. USELF supports projects involving the use of renewable energy for electricity generation. The Programme's budget is 70 million Euro, and this funding comes from two sources. One specific feature of the Programme is that funding is provided directly by EBRD and not via a Ukrainian bank. The detailed explanation of the nature and form of Bank's support was further provided, followed by the presentation of the USELF Programme……

Introduction of meeting participants

Ivan Maximov (presentation)

Questions and answers:

Mustafa Sait-Akhmetov. What are the main differences among 5 scenarios considered in the SER Report? Are they mutually exclusive or can be implemented in parallel though in different locations?

Matthew Clegg. The main difference lies in technology used in each scenario. Each scenario was assessed in terms of availability of resources at the national scale in order to identify those areas of the country where these scenarios can be implemented. We've tried to assess the renewable energy potential at the country level, i.e. how much energy can be realistically generated using each of the technologies considered. These scenarios have been developed in order to ensure a more focused environmental assessment. While there are no reasons why two or more scenarios cannot be used within any area, different areas of the country are characterized by different levels of resource availability for each scenario. The possibility of pursuing several scenarios is particularly relevant in the Crimea with its rich solar and wind energy resources. This issue is discussed in greater detail in the technical papers produced as part of the SER process.

Daniil Manusov. Are there examples of SEA carried out at the national, regional and local level?

Matthew Clegg. The answer is yes, and specific examples will be presented during the meeting.

Alexander Slepokurov. If we take Crimea, then the implementation of all planned wind projects will result in excess electricity generation. Are there plans to provide support to existing thermal power plants willing to use alternative energy sources for heat generation?

Olena Borysova. First of all, the Bank supports electricity generation using renewable sources because it supports private sector initiatives and because this market is not supported by other players. Secondly, this activity will help reduce the country's energy dependence. Rather then focusing on the Crimea specifically, we support the energy sector of Ukraine as a whole.

Alexander Slepokurov. The levels of electricity generation are sufficient both in Crimea and Ukraine, while thermal energy for heating and hot water supply remains a serious issue. Is the Bank planning to support thermal energy projects?

Olena Borysova. The Bank works with municipal companies and we support infrastructural projects. We have a special IF 5 component (Scandinavian countries and EBRD) that is planned to be used to launch the heating network upgrade programme in the medium-sized municipalities of Ukraine. We also maintain focus on examining the possibilities for alternative fuel generation. The Bank has a special credit facility (UKIIP) providing support to energy efficiency and renewable energy projects via the Ukrainian banks. The UKIIP facility can be used to support heat generation projects.

Question: What are the benefits of the SEA process for the Crimea and its energy sector and who can be involved in the future SEAs?

Eugeny Khlobystov. SER is the legal, economic and environmental review of EBRD's renewable energy development programme that enables the early identification of potential areas for conflicts and risks that may arise in any region of Ukraine, including Crimea. These risks may be caused by different factors (political, social, environmental and economic). It was

very appropriately noted that Ukraine generates too much electricity. On the other hand, we have a very complex electricity generation pattern where the major proportion of energy is generated by thermal and nuclear power plants that are considered to pose considerable danger for the environment under both normal and emergency conditions. Therefore we discuss alternative energy as an opportunity to shift to a more safe electricity generation pattern rather than increase the amount of electricity produced. Currently, Ukraine sells electric energy and markets are very limited. We will discuss this issue later.

Natalia Kadasheva. In the report, interconnection has been identified as a constraint limiting the development of all scenarios. Are there other constraints, have they been summarized in a special list?

Matthew Clegg. This issue depends on perspective. First of all, this is a technical issue. For each scenario we consider that interconnection can be a limiting factor and this constraint has been specifically identified for the Crimea with its existing transmission network. In this assessment, we also take into account the potential generation capacity and transmission network capacity. The proposed scenarios do not anticipate the construction of large transmission lines because this is beyond the scope of the USELF Programme.

Olena Borysova. The Bank supports its USELF Programme in three ways, with SER being one of them. The second component involving the provision of support to specific developers was presented by Valentyn Didyk. We also have a very powerful regulatory component where the international consultant works closely with regulators to promote the regulatory reform. This work has started a long time ago, and our team has contributed to the development and adoption of the Green Tariff legislation. All reports produced by our consultants are available on the USELF's website, and so are various renewable energy development scenarios that depend upon the tariffs and constraints considered. This information will help you understand what kind of decisions can be made.

Natalia Kadasheva. All renewable energy projects involve the construction of substations and interconnection. These elements are quite isolated from each other in Ukraine. Is it planned to shift towards the European practice? Or can your consultants provide support and assistance in addressing this issue?

Olena Borysova. This is exactly the kind of support we provide and I recommend you to have a look at the reports produced by our consultants. What we try to do is to ensure that support provided by our consultants is useful for both existing and potential clients. Reports produced by the regulatory consultant have been translated into Ukrainian and published on the USELF's website. Interconnection is a separate and significant issue. We plan to finalise the preparation of the Developer's Manual in the nearest future to provide a guide for renewable energy developers in Ukraine.

Matthew Clegg. Presentation

Eugeny Khlobystov. I would like to discuss two things. First of all, we have to have a clear understanding of terminology used. There are three separate procedures – EIA, environmental review and SEA. In no case does SEA substitute EIA or environmental review. This is a different tool designed to support the spatial planning. By signing the SEA Protocol in 2003 during the Ministerial Conference in Kyiv, Ukraine joined the international community, and this Protocol is part of the Espoo Convention on Environmental Impact Assessment in a Transboundary Context. Since then, no specific regulation was developed in Ukraine to guide the SEA process. The first important step was made on the 21st of December, 2010 with the adoption of the Law on the Strategy of the National Environmental Policy of Ukraine till 2020. This Strategy defines SEA as a mechanism for implementing the national environmental policy. It is expected that during this year the SEA will become an integral part of spatial planning, environmental regulation and territorial development system. What we mean is that the SEA mechanism already exists and can be used. The mechanism we are discussing today as a new thing is something that has already existed for some and proved to be effective both internationally and nationally. Two pilot SEA projects have already been implemented in Ukraine, both in Crimea. A team of experts carried out the SEA process for the Bakhchisarai District and for the Crimea's Socio-Economic Development Programme. For the USELF Programme, the Bank has initiated the SEA process itself but used the term 'Strategic Environmental Review' to be politically correct. In practice, we are dealing with SEA. What is the difference between SEA

and EIA/Environmental Review? First and foremost, SEA seeks to prevent and avoid potential conflicts. Whilst the main purpose of the environmental review and EIA is permitting and reducing environmental effects to acceptable levels, respectively, SEA is about preventing and avoiding potential conflicts that may be associated with current and future projects. We can pick up examples dating back to the Soviet time. The members of the Ukrainian Academy of Sciences had heated discussions regarding the construction of channels on the Danube and Dnipro Rivers though much of them could have been avoided through the SEA process. For any major project, SEA helps us understand where we are likely to be if a) we implement the project; and b) we don't implement the project? In reality, a decision to terminate a project can be also considered as a positive result of the SEA process. In many cases, conflicts arise after the completion of a project rather then during its implementation. It often happens that the implementation of a project does not cause any considerable environmental damage or conflict, which may arise later in the operational phase. We are now discussing alternative energy where the potential for conflicts due to project effects can be significant. There are a number of environmental issues that are associated with wind and solar projects. There are also economic implications. For example, Ukraine currently generates too much electricity, so why we need new generation capacities? First and foremost, we need to change existing generation pattern and move away from nuclear and thermal power plants that are difficult to operate and not safe for the environment. It is obvious that wind and solar plants will not be able to meet the energy demand of metallurgical plants. However, they will help reduce reliance of household customers on traditional energy sources. When it comes to the assessment of environmental effects of these projects, we are governed by existing legislation. SEA does not imply anything new in this respect. For example, the Law on Environmental Protection, Law on Environmental Review, Law on Protected Areas and all existing Codes – all these legal documents should be taken into account during the implementation of any project, including renewable energy projects. The SER materials also include a section describing the regulatory framework in energy sector. We should understand that by moving toward SEA we will be able to ensure that all relevant legislative provisions are properly considered throughout the entire project cycle and that we receive a different result. When we were reviewing the regulatory framework for SEA in Ukraine we found out that an extensive planning and programming system was already in place. Each Oblast in Ukraine has its own socio-economic development programme, and there are many various sectoral and interregional development strategies. In the past, we even used to develop the productive force development schemes as comprehensive documents describing socio-economic development scenarios. It is absolutely clear that the efficiency of any such programme would have been considerably enhanced through the SEA process. It is worth to note that SEA would not add significantly to costs entailed in the preparation of these programmes. The cost of SEA is estimated at 10% of the total cost of preparing a document, and this is not significant while helps us minimize risks associated with at least some of issues identified through SEA. This similarly applies to sectoral development programmes. Ukraine's Environmental Strategy till 2020 has not undergone the SEA process and some of provisions thereof are considered to be quite disputable. Our traditional energy replacement target set at 12% till 2030 may seem very optimistic, but the most important thing is that it sets the direction. Again, EBRD supports wind projects not because we suffer from energy deficit but to emphasise the need to change our energy generation pattern and use those resources that are available in Ukraine. Crimea has good resources for solar and wind power. For example, the Crimean Azov Sea Coast has a unique wind pattern. It can be therefore expected that SEA instruments will be more widely developed and applied in the future. The question is when we will be prepared to use these instruments? It is not necessary to wait for a special regulation that would set out a detailed stepwise procedure for implementing SEA. We should understand that when time comes to carry out SEA on a regular basis, we'll have a sufficient number of people who will know the process and how to use it. As regards the legislative framework, the need for conducting the SEA for various plans and programmes is obvious because it will help enhance their efficiency. An initial assessment at a very early stage may demonstrate that a programme should be either cancelled or modified significantly. Making the public involved at very early stages may help avoid some difficult issues that are likely to cause serious confrontation in the future. At one of

our previous meetings, we were asked whether in our SER we considered a situation where, for example, a landlord refuses to leave a house located within the reservoir development zone and whether this is a non-resolvable situation? If we hold consultations with local stakeholders as early as possible, we have sufficient time to reach a compromise with the landlord. In Kyiv, the Rusanivsky Gardens have been in the centre of conflict for many years. The problem is that a new pipeline route crosses an area occupied by private gardens. Unfortunately, no compromise has been reached at various public hearing events, and this situation remains unresolved to date. This issue can be largely attributed to the absence of a conflict resolution technique and formal character of public hearings held by the developer. The result is a serious confrontation where the parties are not willing to hear each other. Available international experience demonstrates that preliminary consultations often help the parties to hear and understand each other. But a deadlock situation is also possible where you are simply not able to convince a particular person. If a broader community or residents of a human settlement will agree with arguments supporting a proposed development or landscape modification, the situation may develop in a different way. International/transboundary consultations are a fundamental element of international conventions signed/ratified by Ukraine. Regrettably, this is also a serious issue. As we know, our neighbours often develop facilities that cause or may cause considerable environmental and health damage in Ukraine. These consultations are typically difficult to handle. What is most important is that they've started to take place on various projects …….. The Espoo Convention Secretariat says that this process will be further enhanced with the help of the SEA instruments. For example, our Ministry of Ecology is currently in the process of consultations with the Belarusian party regarding the development of quarries near the Shatsky Lakes; with the Moldovan party regarding the construction of oil terminal; and with the Slovak party regarding the construction of nuclear power plant. The SEA instruments help lead these consultations in a more constructive manner. In conclusion, it is worth to note that we already have a methodological approach that will eventually evolve into a proper methodological document. A brief SEA guidance was developed in Ukraine 10 years ago though it remained a document for a rather narrow circle of interested readers due to a limited number of SEA undertaken to date. Apart from assessing potential effects of alternative energy projects, this SER process will help us address many methodological issues. We are prepared to discuss this with you because only local people better know those potential issues that may arise in the project area. When we worked on the UNDP Millennium Development Goals for Crimea Project, many various issues emerged that everyone would seem to be aware of though in reality very few of us would know the details. These issues include illegal dumps, unsustainable management of forest resources, and critical environmental situation in Armiansk and Krasnoperekopsk. All these issues require a more detailed analysis. Currently, we have over 900 illegal dumps in Crimea, and the regional waste management programme is planned to be developed. It would be useful to make sure that this programme goes through the SEA process because it is likely to affect specific communities and specific land areas.

Andrei Artov. Presentation on SEA for the Bakhchisarai District.

Discussion

Marina Khotuleva. To me, a specific feature of SEA practice in Europe that is currently missing in our practice relates to the use of an objective-based approach where the objective of a programme under consideration are reviewed against the environmental objectives identified by a community concerned (at the national and/or local level). Can we consider SEA as a promising technique that can be applied under various conditions in Ukraine?

Andrei Artov. This is a very promising technique, first and foremost as an integration tool. In the beginning of our strategic planning process, our team suggested to focus on issues rather than sectors. Some issues are considered to be inherent to various sectors, e.g. shadow economy. We tried to organize our strategic planning process in a different way, but it didn't work. Therefore we opted for a traditional technique. But the main question was how to put all things together? And we were only able to link and integrate all four sectors using the SEA instrument. While not being the main task of SEA, this benefit is obvious, let alone the fact that it helps avoid potential environmental issues at the national, regional and sub-regional level.

Question from the audience. Several wind plants are planned in the Bakhchisarai District. There are people interested in developing and operating these facilities. Have you indentified any constraints in your SEA for the Bakhchisarai District? While this is obviously a business issue, there might be spatial constraints.

Andrei Artov. One of spatial constraints relates to catchment areas, and the second one is a network of potential protected areas. There can also be social constraints. It is also possible that a recommendation to consider and apply new approaches and technologies is adopted for any proposed project, though this is merely a recommendation rather than requirement.

Marina Khotuleva. One of real obstacles impeding the development and application of SEA in Ukraine is the fact that authorities are afraid that this would represent an additional and expensive limitation to development. Yes, there are limitations, but there are also opportunities. We have the environmental review instrument that is widely favoured by the society, but there are also other options. This is extremely important. If we promote an idea through the economists, it appears to be more viable and useful. It seems that economic authorities are more supportive toward this kind of ideas because they know the instrument and understand that rather than simply banning a development programme it will help them to properly elaborate this programme. This is the most valuable thing. The UNEP-funded project was implemented some time ago to focus on the integrated assessment and planning, and promote the integration of economic, environmental and social aspects. This approach is very well understood by economists. It is worth to think how we will carry out the SEA procedure that this year will become a fully legitimate instrument in Ukraine. How and who is going to do it? What kind of results are we expected to achieve? And what we as a society are going to do with it?

Yuri Lebedev. Processes and technologies are changing and improving continuously…. How often it is recommended to revisit and update an SEA after it has been produced?

Matthew Clegg. This strategic review exercise covers a certain period of time. If we use the SEA instruments to support regional planning, the SEA findings and conclusions should be updated every time we update and revise our regional plans based on the monitoring of implementation of these plans.

Yuri Lebedev. Are there any practical recommendations regarding the frequency of these revisions?

Matthew Clegg. In the European practice, we use 5-10-year planning timeframes, and they govern the revision cycle. Another thing is this strategic review process that covers a period of 100 years, but the SEA findings are typically updated every 5-10 years. By doing this we are able to clarify and minimize those uncertainties that we've identified from the very outset. SEA is a spatial vision but also a vision of the future.

Marina Khotuleva. There is a notion of post-project monitoring in the western SEA systems, which means that you are required to monitor the consequences of any plan or programme after their implementation. Monitoring indicators are identified during the development of a programme and used to monitor the results of this programme. This is a very important aspect. In many countries, including Ukraine, do not have an arrangement for post-project monitoring, and no relevant experience has been and is accumulated. As a result, we have to rely on somebody else's experience in our teaching or research practice. The lack of feedback in the environmental assessment system is one of critical factors. The USELF Programme works on the basis of applications where we only consider those proposals that are submitted by investors. ……... My question to the audience is what are your recommendations regarding the organization of strategic planning process and assessment of various initiatives?

Yuri Lebedev. Ukrainian energy market does not support the development of renewable energy. I hope that our legislation in this area will change to ensure that our energy market is more supportive toward the alternative energy. Have you taken this into account in the Programme?

Eugeny Khlobystov. This is an important issue. The Programme has taken many factors into account. One of considerations was that the government not only supports the development of wind energy through the Green Tariff scheme, but it also has an obligation to purchase the total amount of energy generated. This will promote competition between alternative and traditional energy. There can also be data manipulations as is the case in the Carpathian

Region (not 500 mini HPPs but 500 potentially suitable sites). This is a far cry from 500 real projects. Another question is why do we need mini hydro plants? Local energy sources help improve the reliability of electricity supply. Are mini HPPs bad or good? Is wind power bad or good? Information can be presented in different ways, and we are also likely to face issues associated with the economic competition. The traditional energy proponents would say that they do not receive funding for improving the quality and environmental safety of their generation capacities, so why promote the development of wind power? Especially taking into account the fact that wind power would never replace traditional energy source? These kind of questions are also asked. We use the SEA procedure in order to try and find a compromise.

Andrei Artov. We have a similar situation with wind farms in Crimea, where the most typical question raised at various consultation events is how we are going to benefit from it? People would say that they provide their land and some would even claim that they provide their wind? And what are the benefits? You supply electricity to the market and face various social issues. This is unofficial level, while officially raised issues mainly relate to land tenure and reliability… It is important to make sure that people have an opportunity to think about their future and define their prospects.

Matthew Clegg. Another important benefit of SEA is that we are able to see what happens if there is no strategy or plan. This helps us identify those issues that are likely to arise in the future as a result of our activities. As an example, we can refer to the flood control system existing in the UK. We know that in 50 years our existing flood control dams will no longer be able to protect adjacent areas against floods. The same instrument can be applied here to understand what happens if coal/oil/energy prices drop. And what happens to our system as existing energy infrastructure is getting older.

Marina Khotuleva. Some people would say that SEA is a good thing but it is very expensive, and scarce funding should be better used to address concrete issues. And if EBRD is interested, it can provide additional funding to finance the SEA process. We should understand that the Bank is a typical investor. It has its own environmental procedures and will follow them very strictly for each project. May I ask Andrei Artov – what is your estimate of resources required to undertake SEA, including financial resources, methodological inputs and experts capable of doing this work? Can it be considered affordable at the regional and municipal level in Ukraine or not?

Andrei Artov. …We should think about efficiency... The point is that people should be trained to do this work. In our estimates, we should take into account manpower inputs, public data collection...

Marina Khotuleva. What can be done in poorer and depressive regions that have no resources? We can try and disseminate your local experience in planning and assessment in other regions where other strategic issues may exist that are not addressed in the present SER.

Alexander Slepokurov. Some history: about 30 years ago I managed a project on organizing a large-scale manufacture of mini nuclear boilers for heating purposes, but the Chornobyl accident demonstrated what could have happened if the project had been implemented. It was already approved by the Central Committee of the Communist Party, an implementing agency was appointed etc…. Only some of the members of the USSR Academy of Sciences insisted that it would be better not to proceed with this project. This is one example. Second, we have chemical plants in the north of Crimea. If we had properly examined and analysed this issue back in the past, we would have never had these plants in Crimea. If we had carried out the SEA process to understand the role and place of Crimea in the USSR and Ukraine, and whether chemical plants are needed in Crimea, none of them would have been constructed here. And today we face the legacy of past unsustainable development: we have little or no local apples in Crimea, our gardens are degrading, and our environment has deteriorated to the extent that it would be extremely difficult to restore it. It is clear that each project should undergo a strategic assessment of its consequences. And it can be concluded with all certainty that this SER is a very much needed and serious initiative, and we should actively involve the public in similar initiatives and make them more visible. Non-governmental organizations have an important role to play in this respect.

Marina Khotuleva. Why we are trying to tackle all issues associated with the renewable energy development in one single project and only through the Green Tariff scheme. It might

be appropriate to think about other needs that exist in Ukraine and fall beyond the scope of the Green Tariff (for example, remote villages where electricity supply is not an issue). Or we can discuss specific remote rural communities and their heating/electricity supply issues and how these issues can be addressed by moving away from a strict requirement to supply all generated electricity to the wholesale energy market? This is simply an idea. In our SER, we've tried to analyse the situation, including socio-economic development issues, but you know local situation better than us. But still, would this idea seem sensible?

Answer from the audience. In practice, this is exactly what is going to happen. Speaking of production efficiency of a wind plant, we all know that the unit cost of 1 kWh approximately equals to 1 Euro cent. As regards local needs, the construction of wind plants working in parallel with boiler plants or even solar plants would be a more feasible and cost-effective option as compared to purchasing electricity at 1 UAH per 1 KWh. But to do this, we need to have a more flexible energy market that would enable us to build and operate a plant for our own needs. And the Green Tariff would not be required – this is an arrangement for investors rather than for local authorities. A new law will be needed.

Valentyn Didyk. Some of you may be aware that the concept of the wholesale energy market reform was adopted in 2004, and a relevant Resolution of the Cabinet if Ministers of Ukraine was passed. This process is underway, and reform is expected to start during the next 2-3 years. This will result in a serious transformation of cash and product flows in energy sector. We will have bilateral agreements and based on them electricity generators will sell electricity directly to customers. We will have an electricity exchange. This arrangement is already in place in many European countries and partly in Russia. This idea is embodied in the Resolution of the Cabinet of Ministers. We expect that new political and economic players will emerge in Ukraine to facilitate this process. Relevant documents have already been drafted with the involvement of national and international experts. The Law on Wind Power has been also drafted.

Answer from the audience. As regards the energy security of Ukraine, the first step should be the adoption of the Law on Energy Market. As soon as it is up running the way it is in the civilized countries, I think that we'll be able to reduce our gas consumption at least by 20% within 3-5 years without significant investments.

Marina Khotuleva. One specific feature of legislative process in the western countries is that they first establish practice and then adopt appropriate laws based on the analysis of this practice. In Ukraine and Russia, we kind of drift away from existing practice and try to overtake it. We draft unrealistic laws that do not work because they are not workable. It is therefore required to reach agreement on how a new energy market is going to work, and this may imply the need for more SEAs at the municipal and local level. And we hope that the participants to this meeting will be able to help in undertaking these SEAs.

LIST OF PARTICIPANTS AND MINUTES OF THE STAKEHOLDER MEETING/WORKSHOP IN KYIV, UKRAINE

19.03.2012

Ukraine Sustainable Energy Lending Facility (USELF)
Strategic Environmental Review

Public Consultation Meeting

List of Participants

19 March 2012, 10-00AM

Workshop
Ukraine Sustainable Energy Lending Facility Strategic Environmental Review

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Introduction

19th of March in Kyiv in Hotel Tourist at 10 a.m. the meeting of the representatives of the USELF Programme and Black & Veatch Company / Ecoline EA Centre with stakeholders took place. There was represented the Review

Agenda

1. Introduction and Welcome – Olena Borysova, EBRD Kyiv and Valentin Didyk, USELF Representative
2. USELF Strategic Environmental Review: approach and main findings M. Klegg Black & Veatch, UK
3. Public Consultations Process to Discuss the USELF Strategic Environmental Review - Ivan Maximov, Black & Veatch Russia and M.V. Khotuleva, Ecoline EA Centre
4. Legal and Methodological Framework for the Strategic Environmental Assessment in Ukraine. Potential for Development and Practical Application - Ye.V. Khlobystov, Dr. (Economics), Advisor, Ecoline EA Centre / Black & Veatch
5. Open discussion: comments and suggestions from participants. Moderator: M.V. Khotuleva, Ecoline EA Centre

Minutes of meeting

Introduction and greetings from the representatives of EBRD, USELF

Olena Borysova Today we are presenting the results and findings of the USELF Strategic Environmental Review.

EBRD's activities in the renewable energy sector: the Bank is a major investor in Ukraine's economy, and Ukraine is an extremely important country of operations for the Bank. Energy sector is a priority area for the Bank who cooperates in this area with the Government of Ukraine. We work to promote the use of renewable energy and energy efficiency. To support energy efficiency projects, we provide loans though local banks. This is an important activity area for Ukraine where we also try to support major energy saving and energy efficiency projects.

We also maintain continuous dialogue with the Government of Ukraine to discuss energy efficiency initiatives in the municipal service sector. The USELF Programme is a pioneer initiative in Ukraine. We have gathered to discuss the SER findings and how these instruments can be used in Ukraine.

USELF is a complex programme supported by the Bank. Related consultancy support is financed by the Global Environmental Facility. Apart from the SER component, we support two consultancy components. The regulatory consultancy component involves close cooperation with the Government Ukraine on renewable energy and energy efficiency issues.
We open in our activities. The regulatory component outputs are available on the USELF website.

Valentyn Didyk (Presentation) We are open for discussions and our office is located on the Shovkovychna Street. All documents are available on the Programme website.
As part of the SER process, a comprehensive suite of materials on the renewable energy potential in Ukraine has been developed, and your are invited to have a look a them. The purpose of our meeting is to learn more about proposed renewable energy scenarios for Ukraine.

Marina Khotuleva The Strategic Environmental Review for the USELF Programme has been undertaken by the Black&Veatch Company

Introduction of participants

Marina Khotuleva Workshop agenda – discussion and suggestions; information on handout materials.
The suggestion is to listen to the Black&Veatch presentation on the Strategic Environmental Review produced in line with the EU Directive and then hold a discussion

Matthew Clegg (presentation)

Igor Serenko Why fish passages are not included in the HPP design?
Whether and how consideration was given to:
- the Carpathian Convention
- other environmental conventions signed/ratified by Ukraine
- the Red Data Book Law of Ukraine.
What protected areas were considered and whether planned protected areas were also taken into consideration?
Recommendation: include the provision regarding fish passages.

Matthew Clegg Detailed facility design is beyond the scope of the SER, but proposed schemes are described in the report. We'll try to incorporate all your comments in the report. We've considered all protected areas at the regional level and space imaging data on all environmental sensitivities regardless of their protection status. EBRD is very strict in its environmental requirements and we emphasise the need for ensuring compliance with these requirements in our SER.

Andrei Konechenkov If this map shows the most suitable areas, does that mean that only projects in these areas can be funded?

Matthew Clegg Our report focuses on environmental aspects rather than on technical issues. That said, the SER Report is based on five technical reports where assumptions and constraints are identified for each renewable energy scenarios. The purpose of the SER Report is not instructing where and how each type of renewable energy should be developed but identifying environmental and technical constraints that should be considered to ensure that renewable energy develops in a sustainable manner. We in no case try isolate developers from the process, but developers should be able to demonstrate that a project can be implemented in a proposed area and can be viable

Andrei Konechenkov If this map shows the most suitable areas, does that mean that only projects in these areas can be funded?

Matthew Clegg These maps illustrate those areas that are considered to have the most suitable conditions for wind energy projects and where wind resources are of best quality.

Ivan Maximov (presentation)

Valentyn Scherbyna I would like to draw attention to the following points:

- The SER objectives do not consider cumulative impacts. They are not reflected in the report even at the objective-setting level.
- No consideration was given to transboundary impacts (and related protocols and conventions) though these are likely to be associated with renewable energy projects.
- Potential impact on near-ground air temperature was not addressed.
- There is insufficient information on how adverse impacts on coastal ecosystems can be controlled.
- Geology and soils –the terminology is somewhat inappropriate and the issue has not been addressed with sufficient detail.
- When and from what perspective the objectives were set?
- Landscapes – in our legislation, regional and international scale are clearly delineated, and different procedures are applied
- The classification of projects into national and transboundary categories.
- The Red Data Book of Ukraine is a key piece of legislation that can stop a project at any stage.
- There is the Green Data Book that should be also taken into account.
- We will provide all our comments in writing.

Olena Borysova Cumulative impacts were assessed because they are in the heart of any environmental project. Your comments are very valuable though they largely concern the way the material is presented. There can be no SEA without the assessment of cumulative impacts. According to EBRD requirements, many of renewable energy projects would not require detailed assessment – only environmental assessment and/or audit. For some of them, EIA is not required. Therefore it is particularly important to consider potential cumulative impacts of multiple smaller projects.

Matthew Clegg The SER objectives were identified through the assessment of likely significant environmental impacts and identification of proposed mitigation measures.
Cumulative impacts were addressed as they may affect both fish communities and river flow. Information on these impacts is presented in relevant sections in the SER report.
We have also considered potential transboundary impacts that may arise as a result of large-scale projects implemented in the cross-border areas. If you feel that this issue should be addressed with greater detail, we will take this into account.
You should understand that the Bank does not identify the exact locations of proposed projects, and assessing potential cumulative impacts of projects whose location is not known. Therefore these impacts were only assessed at national level and will require further analysis/detalisation at the regional and site-specific level.
The national-level SER can provide a basis for a more detailed impact assessment at the regional or project level through consultation with local decision makers and stakeholders.
We would like to re-emphasise that the SER Report is a document for information and consultation that provides an overview of renewable energy potential in Ukraine. Data provided in the Report can be used as a basis for site-specific assessments.
We have case studies illustrating how SEA tools were used to support strategic planning at the regional level

Ivan Maximov A small remark regarding transboundary impacts. The SER process commissioned by EBRD differs from the traditional environmental impact assessment. We've reviewed virtually all regulations and directives relating to the transboundary impact assessment and it appears that Ukraine has no official procedure to regulate projects implemented in the transboundary areas. These projects require consultation at the governmental level. The detailed analysis of this issue is beyond the scope of our ToR. Furthermore, our SER Report does not include a section on monitoring, and this is another reason why we use the term 'strategic environmental review' instead of 'strategic environmental assessment

Valentin Scherbina Transboundary impacts are likely to arise if even small hydropower facilities are proposed on the cross-border rivers.

Ivan Maximov This is an extremely important issue and it is subject to inter-ministerial and inter-governmental consultations

Marina Khotuleva I would like to re-emphasise that this SER has been initiated by the Bank for its lending facility that considers project applications. This means that this Report does not provide recommendations regarding where to build what. This is the Strategic Environmental Review whose scope goes above and beyond a specific project. At the project level, an environmental assessment will be carried out to assess potential effects of individual facilities. The SER process for the USELF Programme is different from SEA undertaken for a national programme or plan.
It is important that we hold a constructive discussion that provides a basis for further action. There are a number of issues regarding protected areas. But any national programme is not able to take account all potential constraints that exist at the regional level in relation to protected areas.
There are many issues that may arise at the project level for the small hydropower scenario. We should try and identify any other issue that may emerge.
EBRD never instructs Ukraine how to implement projects and we similarly can't tell the Bank what should be done and how. We have to try and identify potential effects and areas for conflicts to avoid them as early as possible. It is also required to consider potential effects on a specific area and local communities.

Irina Golovko A couple of questions regarding the SER process. You mentioned that one of SER objectives is laying a foundation for future project assessments. It sounds quite surprising in the light of the fact that a number of projects are already approaching completion, and my question in this respect is as follows:
- the SER process is not completed, its results and recommendations have not been finalized yet, but the projects are carried out. How these exactly projects were assessed? Are they going to be taken into account and re-assessed during the preparation of the final SER Report?

Marina Khotuleva There projects that have been launched before the SER. A project cannot be terminated without proper justification. This SER has been prepared in line with the national legislation, and all USELF-funded projects are required to be prepared and implemented to EBRD standards.
Also, EBRD has Performance Requirements governing the implementation of individual projects. These documents are available on the Bank's website.
A project design can be modified based on the EA results. If there are any comments and remarks regarding the Bank's and USELF projects, they should be conveyed to EBRD and USELF using relevant procedures.

Olena Borysova We have prepared the templates of all project documents, and these are also in line with EBRD requirements. These templates have been tested on a medium-sized wind power project and all necessary improvements have been made.
Project results are linked to objectives of specific assessments. Ideally, SEA should be carried out before the launch of a programme, but even if there are gaps, they can be addressed at the project level.

Irina Golovko How many projects have undergone the environmental assessment?

Olena Borysova The environmental impact assessment process has been completed for 4 projects

Oksana Tarasova Are these environmental assessment reports publicly available?

Olena Borysova There are certain time restrictions on the publication of these materials because it is not correct to disclose information before a mandate letter has been signed between the Bank and a developer.
The EIA report for our first pilot project is available on the USELF website where you can also find information about this SER.

Andrei Konechenkov I have an impression that the EBRD initiative is treated as a national programme here. We need to distinguish between USELF and other EBRD-funded projects because the Bank can finance larger projects while USELF supports only small projects that are less likely to cause significant environmental impacts. The Bank has developed a set of environmental impact assessment documents but only some companies in Ukraine understand and use them.
This report describes potential environmental impacts of renewable energy projects, and this type of assessment is very rarely carried out for other programmes. There is a set of publications that consider environmental impacts.
The inclusion of a short plan of mandatory procedures to be completed for each project would help developers understand what they should do. And this would help distinguish between USELF projects and other EBRD projects

Olena Borysova The USELF SER is a bottom-up process where we assess those projects that can be potentially initiated by investors. This makes the task of strategic environmental review a bit more difficult. As regards recommendations for developers, we fully agree with you. This is yet another opportunity to demonstrate that we can help.
As part of USELF and through cooperation of three our consultancy teams, we plan to develop a guide for developers. We will take into account your experience in wind energy and try to apply it in other areas.
The procedure to be followed by developers whose projects may qualify for USELF funding can be used for other projects. How to apply for the Green Tariff and receive EBRD funding for renewable energy projects in Ukraine

Marina Khotuleva It is an important comment. We should understand that here we are not discussing the national renewable energy strategy.
Many developers seem to have insufficient understanding regarding the importance of the public consultation process which is much broader than public hearing events. The Bank's Performance Requirement 10 describes this process in detail, and this document is available in Russian. It includes references to various best practices adopted by EBRD, World Bank, and International Financial Corporation and comprising practical recommendations, but this information is generally available in English

Oksana Tarasova The SEA Protocol has already undergone the inter-ministerial endorsement procedure and is about to be submitted to the Cabinet of Ministers and then to the Verkhovna Rada of Ukraine. Therefore we have to think how this SEA protocol can be implemented and transposed into the Ukrainian legislation.
As regards the SEA itself, it demonstrates those issues that are likely to arise and as such is required for regional programmes. All these issues are currently being considered and we invite to provide your comments and recommendations regarding the development of SEA legislation.
We already have a programme involving the construction of over 330 small HPPs in Zakarpattia, and we are likely to have problems both within the country and with out neighbours if this programme moves forward. And we have to bear this in mind.

Vyacheslav Potapenko I have a number of comments:
- Despite any nuances, you have produced a very good and much needed document. This area receives little or no development – let alone state funding – these days. The Government,

President and Environmental Committee finance only 10% of required environmental expenditures, and this funding is spent on something else rather than used to finance environmental programmes. Little or nothing has been done over the past year but money has been spent. And if there is European funding and experts willing to commit their time and effort – even if they do it based on their interests and use their standards – this is a big advantage. It should be also noted that the European environmental standards are more advanced than our national standards.
A strategy is a stepwise procedure toward achieving the specified objectives rather than an action plan. Therefore, in any strategic analysis or assessment we define a suite of objectives. A strategy is not about how to win the 2015 or 2013 elections or how to earn money this or next year. It is about what is going to happen in 20 years. In other words, we know that nuclear power plant units should be decommissioned but internal regulations have been adopted to extend their operational life and the plants continue their operations. All these power plants using fossil fuel and polluting the environment will be phased out. Tax burden will be so heavy that traditional electricity production processes will be become unviable. And we understand that renewable energy will have a considerable market share, though not now but in 20 years. We need to develop this sector in order to reduce Ukraine's reliance on imported fuel. It is very good that we have people willing to invest in these projects.
The situation we currently have in the Ukrainian legislation is nonsense. We have two laws passed by the Verkhovna Rada, the Economic Development Strategy and the Strategy of the National Environmental Policy, and these laws are mutually contradictory when it comes to the development of energy sector.
This strategic review will be used as a basis for future projects. Loans will be provided, new plants will be developed, and these projects will involve the transfer of technologies, enhancement of business planning and corporate management systems. This will form a basis for the development of renewable energy that is expected to cover at least 30% of Ukraine's energy demand in 30–40 years.
A doctorate paper examining the environmental impacts of the Trypillia TPP is currently being prepared.
Techniques like SEA will always involve some degree of uncertainty. A greater certainty can only be provided if we focus on a specific region, specific area and specific impacts generated by a specific plant located in this area. And even in this case, the accuracy and certainty can only be ensured within a 10–20 km radius. I therefore consider that it is not correct to require a high level of accuracy on each specific area from this Report, which is very important and useful as a document reflecting the general assessment.
Based on this document, European officials will make their decision whether to provide financial support for renewable energy projects or not. And this document clearly shows that these projects can and should be supported.
If this report was 5 pages long and contained only general words, it would have raised little or no criticism. Instead, the authors have done a huge job and produced a very detailed document that has caused many questions. I appreciate very much all the efforts of those people who focus on environmental issues and, most importantly, on how they can be integrated into our economic development agenda.

Victor Gavrilenko This report has been prepared for the purposes of the Bank. It comprises maps showing the following areas:
- those that are suitable and have good resource potential for renewable energy projects,
- those that are less suitable and where a renewable energy project will require more detailed assessment and might be rejected.

It is obvious that such map is very much needed for the EBRD that is not a cynically commercial bank and offers lower interest rates. Being not cynical but conscientious, the Bank is willing to finance those projects that it won't be ashamed of.
Small projects are financed by USELF and larger projects are financed by EBRD. And the Bank officials will use this report to support their lending decisions.

Olena Borysova EBRD is a development bank. We have the mandate where development plays a key role. We support private investors and market-based instruments. But it is our policy and practice to demonstrate that market-oriented economies can be developed in an environmentally sustainable manner. We want to demonstrate that commercial projects can be economically viable and environmentally sustainable.
We understand your concerns regarding maps. But they illustrate the use of GIS instruments, and decision-makers seem to like this type of instruments. Theoretically, there can be a situation where the fact the a proposed project is located in an unfavourable area will serve as a basis for rejecting a project.

But we've reiterated many times that SEA is not a deterrence instrument. Under our legislation, everything that is not banned is allowed. What we are talking about is whether a project is likely to be profitable if it is located in an environmentally/socially sensitive area. As regards specific project, they are assessed on a case by case basis. Each project requires an individual approach to analysis and assessment that can be underpinned by available national-level assessments.

Matthew Clegg SEA is not a deterrent; it is a basis for consideration. In no case should it be treated as a ground for rejection. Technical exclusions have been identified for information purposes. Those developers that are willing to develop their projects in these areas should be able to demonstrate that their projects are both environmentally sustainable and economically viable.
Developers will be required to carry out a comprehensive analysis clearly showing that their project is viable. SEA is not a screening instrument, it is not intended to be used this way.

Vyacheslav Potapenko There are many wind potential maps, and the Bank uses certified techniques to measure it. But if we bring our report and will be able to prove that it contains justified estimates – will the Bank accept it?

Olena Borysova Yes, sure

Oksana Tarasova A question regarding small projects – if there are many of them, their impacts can be significant. How the work with small projects will be organized in specific regions.
Maybe, it would be useful to carry out the public assessment for high-profile projects. We don't have legal framework to regulate this type of things.
We have studies showing where renewable energy projects are possible, but this is different from how many projects are exactly needed in a specific region. This the question to answer when we start thinking about the environment at the national and regional level.

Eugeny Khlobystov 330 mini HPP projects in Zakarpattia means 330 potentially suitable sites, not concrete projects.
The Bank cares about its reputation and its project sites should not cause public confrontation. The Bank's reputation means much more than potential profits.
Therefore we plan to spend a whole day in Lviv to discuss small hydropower projects in the Carpathian Region with the local expert community and public.

Oksana Tarasova I do not question the Bank's intentions, but there can be other projects that are not supported by the Bank.

Olena Borysova Our activities are underpinned by specific principles. Our current meeting and the whole our tour of Ukraine are an attempt to disseminate this instrument. Regional SEA is not part of the Bank's mandate. But this is a very useful instrument and there are many various methodological documents and reports describing how it can be applied. This instrument can be used by governmental authorities, NGOs and experts. As you see, we are here to help and offer our documents. All information is available.

Marina Khotuleva There is no requirement to carry out SEA for this type of projects, this is the Bank's initiative. Today, we presented the results of this initiative that involved the use of various instruments. I'm sure that there are many specialists in Ukraine that are able to carry out similar scenario-based assessments at the regional level.
The cost of this assessment is about 10% of the total cost of a programme. But it's different if there is no programme – how can we assess consequences without a programme?
In the SER, we've used a number of instruments, including the objective-based analysis (where scenarios are assessed against the specified objectives). As was already mentioned, Ukrainian environmental and economic strategies contradict each other. This is because they have mutually contradictory objectives. This problem could be addressed through the SER or SEA process. All objectives are generated by expert community. There are many people that have the capacity to carry out environmental assessment, and we have to enhance this capacity within our community. There can be existing projects associated with specific issues, and these issues could be addressed through a regional assessment that would be supported by detailed project-specific assessments.
An efficient and properly developed programme is equally important as a good project. Apart from conveying information, our task is to think how this analysis could be applied across all levels and carry it out wherever it is considered possible and useful.
I would suggest that we discuss all potential issues that can be associated with renewable energy to ensure that achieve the most efficient results.

Igor Serenko If this programme was developed a year earlier, it would have not caused any problems in the Carpathian Region. People have an impression that funding for renewable energy developments tends to be provided to a specific company, not to a specific project. Seeing all these projects that affect the environment, we launched the Save the Carpathians against Small Hydropower Developments campaign.
In the Carpathian Verkhovyna, a project is implemented within the boundaries of a planned national park. The public hearings were held. But the project continues in a manner that is unacceptable for local public (construction activities go on in the night time and during the church service). This is the Black Cheremosh project that is not funded by EBRD but affects the entire region's ecosystem.
If possible, you could recommend the government to grant the Green Tariff right to projects rather than companies. Lack of transparency in this issue results in the situation where impacts caused by projects become uncontrollable.
The Report includes the list of redundant HPP sites. If they do not dam up a river completely and do not pose threat to the environment, they can be developed. We have no objections against projects that are safe for the environment.
We will provide our comments in writing

Marina Khotuleva We can use this as a basis for our discussion. If there is a project that is not funded by EBRD but opposed by the local public, it might be difficult to change public attitudes when a properly justified and environmentally acceptable project is proposed.
There is an idea to develop environmental criteria for projects financed through the Green Tariff mechanism. EBRD has its own strict criteria. It is not sensible to reject all projects, we just have to make sure that their environmental impacts are minimised.
Construction practices employed are no less important than siting. Construction phase should be also subject to the environmental impact assessment, especially when a proposed development is located within a planned protected area. This needs to be very carefully considered before a construction permit is granted.
Again, EIA is required for the construction phase, to include a proper public consultation process rather than formal public hearings that can be easily manipulated.
The Bank requires identifying stakeholders for each project, while there is no similar requirement in the national legislation. By identifying and interviewing all potential stakeholders we minimize risk of manipulation.

We can define social obligations for developers and identify those improvements that are necessary for a region. For example, road construction, in order to make sure that there are both national and regional benefits.
If national funding is provided to finance road construction and riverbank strengthening, the way these funds are used should be monitored.

Victor Gavrilenko I have a question regarding solar energy: we have a lot of sun in Ukraine and can recover solar power with photovoltaic elements, but shade cast by solar panel may impede photosynthesis in vegetation cover. As a result, the carbon sinking ability is affected. Have you assessed and considered this impact?
By installing solar panels, we virtually reduce the area of vegetation cover – has this factor been considered in solar energy costs?

Valentyn Didyk We are definitely not in the Amazon Basin and sites that are likely to be used for solar plants are typically covered with pebble or gravel.
Victor Gavrilenko But the map shows that a large part of Ukraine is potentially suitable for solar power developments. And there are some existing projects where solar panels occupy a considerable area of land with fertile soil.
I'm against this type of projects and only support small roof-mounted installations because vegetation is very important.

Matthew Clegg This kind of risk may exist. It is obvious that solar panels should be installed in the areas with the best solar resource. But we've also identified environmentally sensitive areas for information of potential developers.
As regards roof-mounted installations, they do not qualify for the Green Tariff and, consequently, for the USELF Programme.

Victor Gavrilenko If we compare areas with good solar resources and environmentally sensitive areas, how much potential energy will be available for development?

Valentyn Didyk There are many places in Ukraine where land is covered with pebble and gravel and that can be used for the construction of solar plants.

Matthew Clegg Potential locations and conditions for solar projects are described in the USELF SER materials

Valentin Didyk The USELF budget is 70 million Euro, and the programme will be implemented till February 2013. We'll be able to commission from 20 to 30 MW of installed capacity, which is not too much as compared to 53.2 MW of capacity that is already in operation in Ukraine.
As regards solar power, biomass etc. The scale of impact in a specific area depends on a broad range of factors, and we consider all of them. EBRD is committed to ensuring that renewable energy causes no damage to local ecosystems. The USELF SER considers all potential renewable energy projects.

Matthew Clegg The following technical exclusions have been defined for solar power projects:
- slope 5%,
- forested land
- environmental sensitivities .

This impact is taken into account in the document templates prepared to ensure compliance with the Bank requirements.

Victor Gavrilenko With all these technical exclusions and constraints, is there any space left for large-scale projects?

Olena Borysova USELF does not provide funding for large-scale projects.

Victor Gavrilenko I mean EBRD projects in general. You've prepared SER, and it is an instrument to be used by EBRD.
How the effects of shading were assessed and how much space remains available for development?

Olena Borysova We haven't estimated how the consideration of shading effects would limit the development of solar projects.
The effect of shade cast by solar panels on the ecosystem's productivity has not been considered as a constraint in the USELF SER due to a relatively small size of USELF projects. Other projects that are not eligible for USELF funding but can be funded by the Bank undergo a more detailed project-specific environmental assessment. Major projects are subject to the detailed environmental and social assessment in line with the Bank requirements, and this helps us ensure that their impacts are properly considered.

Victor Gavrilenko What types of exclusions are shown on the solar power potential maps.

Olena Borysova Slopes and sensitive areas

Matthew Clegg These maps show areas with the highest levels of solar insolation. Sloped areas are excluded and so are water bodies, marshes and forests. After that, we've identified environmentally sensitive areas in the remaining territory.

Marina Khotuleva To summarise this part of discussion, you've raised an important point relating to solar power. At the previous meetings, people expressed concern over potential adverse impact of biomass projects on soil properties. These issues are very important but they cannot be addressed at the national SER level.
For each major project, all potential risks and environmental impacts should be assessed, and this should be part of the national practice.
On the other hand, there can be different initiatives and funding programmes. The same relates to estimating the acceptable number of mini HPPs in a given region. There are no such estimates. But this issue can be addressed at a lower level that deals with specific spatial plans and land areas.
WORKSHOP RECOMMENDATION: To carry out the strategic environmental assessment of regional plans and programmes, especially in the context of the forthcoming ratification of the SEA Protocol.

Oksana Tarasova Our suggestion to produce an assessment for the Carpathian Region means that methodological recommendations should be developed, to link all levels from the national to regional and local, with criteria and objectives specified at each level. This is the way how it works. These methodological recommendations could be further incorporated into the Ukrainian regulatory framework along with the criteria regulating the design and number of planned facilities.

Valentin Scherbina I agree with this suggestion but would like to re-emphasise it a bit. The SER has a methodological objective as it seeks to establish a framework for the Bank's projects. This is an unprecedented attempt and as such is very useful and deserves support. A couple of remarks:
The review of legal framework provided in the report is beyond criticism. And there are many remarks to the document itself. It would be appropriate to make sure that this report is a living document that can be regularly updated to reflect changes in legislation. Proposed scenarios are based on the 2009-2010 legislation and as such can be out o date.
Whilst the preparation of this SER is a positive experience, the legal framework described in the report cannot be used. A living document is needed to make sure that those 67 proposed to be funded through USELF are in line with the current legislation.

No SEAs are undertaken at the regional level.
Another point: it is good that objectives are specified in the very beginning of the report. But these objectives lack clearly defined indicators – these are needed to support the objectives. It is also recommended to provide a glossary of terms because not always the terminology is translated correctly.

Marina Khotuleva The document was produced in English and translated into Ukrainian. Unfortunately, translation inaccuracies may occur, and in these cases the original English version should be used.

Matthew Clegg These detailed comments are very valuable for us. I agree that the description of legislative/regulatory framework and political context should be up to date, and we will try and address all your comments.
During the preparation of our reports we used source documents in different languages. The idea of providing a glossary is useful and will be taken into account. The authors of SER reports were guided by the European practice with regard to the terminology and structure of documents.

In any case, these comments will be very important for developing the methodological framework for SEA.
I agree that indicators are required for measuring progress toward specified objectives. This issue has been actively discussed among the SEA practitioners. The main focus of this discussion has been on when and at what level these indicators should be applied. It is also quite difficult to set credible indicators for qualitative objectives. But we will try to suggest potential indicators and will be happy to receive your comments and ideas.

Ivan Maximov I have a remark regarding the consultation process. Last month we met with the representatives of the Ministry o Ecology and Natural Resources to discuss the use of SEA instruments and they demonstrated interest. A meeting with regulators is also planned to promote SEA in Ukraine.
Marina Khotuleva We can now discuss how SEA instruments can be used in regional planning.

Eugeny Khlobystov I would like to emphasise a couple of things:
1. Many comments and remarks have been expressed regarding the SER Report. I would like to stress that it is a document prepared for the purposes of the Bank, not a scientific paper or state programme. While we appreciate all remarks and suggestions that aim to improve this document, we should remember that it has been prepared in the format specified by the Bank.
2. Our discussion focuses on how SEA should be applied in Ukraine in the situation where it has not yet become part of the national legislation and very few case studies exist. In this respect, it would be very useful to listen to the presentation about the Bakhchisarai District Development Strategy SEA.
This public consultation meeting ultimately aims to improve the SER materials that can be subsequently used as a basis for promoting the use of SEA in Ukraine.

Oksana Tarasova The SEA development programme is very useful for Ukraine because we need to have a good methodological framework.
SUGGESTION: this initiative could be used as an opportunity to develop a concept of how SEA instruments should be applied at various governance levels, from national to local. Because otherwise we'll be waiting for required legislative changes, but meanwhile we can develop and suggest a methodology that is equally important.

Marina Khotuleva From our experience, many things can be done a voluntary basis, especially where people understand what and how should be done.

Oksana Tarasova When it comes to methodology, we have to be able to speak a common language with all stakeholders, from bank officials to local authorities.

Igor Serenko It would be very useful if the SER document clearly specified what exactly projects should be supported.
I'm prepared to pay more for green energy, but there is no arrangement for this Ukraine that would ensure that my money is used to support green energy.
As regards the Programme, we need to have clear criteria to make a decision whether the Green Tariff should be granted or not. The existing situation in the Carpathian Region to a significant extent is a result of prevailing practice when the Green Tariff is granted to a company rather than to a specific project and there is a general lack of transparency in this process. Can the Bank recommend the Government whether the Green Tariff should be granted or not?

Marina Khotuleva I suggest that we use these meetings as an opportunity to start formulating the national social and environmental criteria for renewable energy projects. You are welcome to send your suggestions by e-mail. I think that USELF would be interested in these suggestions.

Olena Borysova The Bank cooperates with the Government but we can't recommend which projects should be granted the Green Tariff and which not. We can only provide information support upon the request of any governmental body or interested organisation.

I invite you to read the SER materials because we've heard many questions on how many projects can and should be implemented, but all these things are regulated through the Green Tariff.
Our experts have made their estimates, but it is not the Bank's mandate to recommend the level of intervention. We can only provide an instrument, and it is up to the government to decide whether use it or not.

Oksana Tarasova I have very few questions/comments to your report. The EBRD's experience and the way the Bank provides funding can be used as a model. I just want to reiterate that we need to develop a comprehensive methodology for SEA.

Marina Khotuleva We can only recommend that SEA be carried out for existing regional programmes. We've sought advise on whether SEA can be carried out for an existing programme and the answer is yes. This work brings practical results that can be used to amend/correct the programme. We can jointly estimate regional potential. Because at this stage we have only potential sites but there are no specific projects and no funding.
There can be a poorly developed project and when USELF comes with all its good intentions local people would oppose. There are campaigns against mini HPPs where they would just oppose to everything. But we need to develop and implement social projects and should be able to adequately assess future perspectives.

Igor Serenko We suggest a moratorium on all mini HPP projects in Ukraine and that all permits issued to date should be cancelled.
Then we suggest carrying out the strategic environmental assessment at the regional level, developing criteria and only afterwards considering specific projects and completing all required permitting procedures for them.

Aleksei Kabyka You can't cancel everything because you are going to face multiple lawsuits. It is not sensible to cancel everything because money has already been spent.

Igor Serenko Many expert review decisions can be disputed in court. But these issues should be addressed at the national level.

Marina Khotuleva Without proper reasons one cannot cancel an already issued permit.

Olena Borysova EBRD supports market economy, but we also try to balance environmental and economic interests and avoid a situation where these clash. This is the reason why we use SEA in our practice – we want to avoid a situation where environmental and economic interests contradict each other. These things should be mutually supportive, not mutually exclusive. And SEA is an instrument designed to achieve this harmonisation.
I have no mandate to offer you my vision, but we should consider each project on a case by case basis. In our legislation, we have tools that can be used to terminate any project deemed to pose threat to the environment, and these tools should be used for existing projects. As regards future project, they can be dealt with using SEA.
Even within the framework of our programme we can consider objectives and criteria with greater detail. And your suggestions regarding potential criteria will be very much appreciated. We also hope that our SER Report will help you design these criteria.

Marina Khotuleva We can start formulating environmental criteria for mini HPP projects. And we are looking forward to receiving your remarks and suggestions by e-mail.
I thank everybody for your contribution.

LIST OF PARTICIPANTS AND MINUTES OF THE STAKEHOLDER MEETING IN LVIV, UKRAINE

MEETING -1 AND MEETING -2 (ROUND TABLE)

20.03.2012

Ukraine Sustainable Energy Lending Facility (USELF)
Strategic Environmental Review

Public Consultation Meeting-1

List of Participants

20 March 2012, 10-00AM

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22	Liudmyla Ivanivna Maxymiv	National Forestry University of Ukraine / Director, Environmental Economics Institute		
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Introduction

On the 20th of March, 2012 at 10-00 a.m., the representatives of the Black & Veatch and Ecoline EA Centre, EBRD Ukraine and Bank's Ukraine Sustainable Lending Facility had a consultation meeting with stakeholders in Lviv, at the Eurohotel Conference Hall, to discuss the USELF Strategic Environmental Review Report.

Meeting Agenda

1. Welcome and introduction – Olena Borysova, EBRD Programme Manager; Valentyn Didyk, USELF
2. Introduction of participants
3. Presentation: USELF SER Approach and Findings – Matthew Clegg, Black & Veatch, UK
4. Public discussion of the USELF SER Report – M. Khotuleva, Ecoline EA Centre; Ivan Maximov, Black & Veatch, Moscow
5. Presentation: Legal Framework and Methodological Approach to Strategic Environmental Assessment in Ukraine; Potential for Development and Practical Application; Best SEA Practices and Potential for their Application in Ukraine – Ye. Khlobystov, Advisor, Ecoline EA Centre
6. General discussion – Ye. Khlobystov, Advisor, Ecoline EA Centre
7. Summary and wrap up – Ye. Khlobystov, Advisor, Ecoline EA Centre.

Minutes of Meeting

Olena Borysova (Welcome and Introduction)

Valentyn Didyk (Presentation)

Introduction of participants and their expectations

Matthew Clegg (Presentation)

Ivan Maximov (Presentation)

Marina Khotuleva (Presentation)

Discussion:

V. Vorobei: What is the purpose of this consultation? How stakeholder remarks are going to be addressed?

Ye. Khlobystov: These remarks will be taken into account in the final SER Report

O. Borysova: SER experts will use these remarks to improve the Report and make it more useful for the public

V. Vorobei: How the SER Report is going to be used? What requirements the borrowers are expected to meet? Can a funding request be denied?

O. Borysova: The SER Report will be used by the Bank and USELF to support the feasibility assessment of individual projects. The Bank support private entrepreneurs. Before providing funding, the Bank will assess the attractiveness and feasibility of each project proposal.

M. Khotuleva: USELF is intended to support investors. It would be useful to consider how SEA can be used at the regional level

O. Borysova: The Bank is likely to support those projects that meet environmental requirements.

Ye. Khlobystov: The Bank may express its reservations about those aspects that are likely to raise public concern or about potential environmental damage caused by the project's impacts.

D. Skrylnikov: The construction of small HPPs in the Carpathian Region will cause considerable damage to the environment and eco-tourism.

Matthew Clegg: The accuracy of information provided in SEA depends upon the reliability of data available in public sources. The scale of assessment should be taken into account (the SER has a national scale). The SER has considered sensitive areas, watercourses, protected areas and ecosystem status, and the level of detail reflects the scale of the SER exercise. Information on the range of potential impacts is available in the Annex E to the SER Report. The SER has considered a number of political and geographic criteria. It is important to identify those types of data that need to be considered in the assessment.

The most valuable output from the consultation process is information about the regional/local specifics provided by the participants. The analysis of small hydropower development scenario has taken into account flow characteristics, environmental data and other information. The UK Environmental Protection Agency has experience in developing and applying SEA criteria.

Ye. Khlobystov: EBRD will consider all potential impacts (watercourses, protected areas, Red Data Book Species) and may decide to reject a project proposal.

O. Solodiak: How long it has taken to the UK to implement the SEA?

Matthew Clegg: About 8 years. In 2004, the UK adopted the SEA legislation. I've been dealing with SEA since 2002. The main limitation relates to availability of data and ways to use it. It is important to understand the essence and ultimate objective of any plan, and communicate this information to stakeholders. From my experience, one cycle of assessment is required to establish the required level of detail.

O. Borysova: Our legislative practice is somewhat different. We plan to ratify the SEA Protocol this year. In the UK, they started from applying SEA tools as part of pilot projects and then incorporated them into their legislation. The UK Environmental Protection Agency is the main permitting authority that is also responsible for maintaining the proper state of environment.

V. Holovnia: Do you use fish protection systems in the UK? Our systems have an efficiency of 70%; what about the UK?

Matthew Clegg: Fish passages are used, but this is only one of potential impacts. In the UK, these issues are addressed at an individual site level. There are many various systems that prevent fish from entering the turbine. There are fish locks in the USA. There are many factors that need to be taken into account in the hydropower plant design. There are experiments with using genetic and chemical agents to keep fish away from hydropower turbines. Also, there are schemes where the loss of fish stock is compensated through the construction of fish breeding farms elsewhere.

Ye. Khlobystov (Presentation)

V. Vorobei: Hydropower plants may cause damage to the environment and eco-tourism. USELF experts should be aware about the Green Tourism Programme. Potential risks are associated with low level of institutional awareness. We need to enhance our ability to maintain dialogue, access to information and transparency, and ability to think strategically.

Technical assistance provided under the USELF at an individual project level is very important. International banks should be involved in financing specific projects.

O. Borysova: USELF provides technical and regulatory assistance (the latter relates to the National Energy Regulatory Commission of Ukraine). We have a team of experts providing this assistance. As regard the alleged lack of transparency, all information about clients is available on the USELF site. This information is not disclosed at the negotiation stage, but all approved documents are publicly available.

L. Zahvoiska: There are many areas for conflict, and special attention is focused on the Carpathians. Construction activity may cause the loss of river flow and forest cover. Eco-tourism is likely to be affected. The threat to protected areas is obvious. It would be more beneficial to utilize landfill gas – this would also help increase the rate of waste recycling. As regards solar plants, the utilization of end of life solar collectors will become a serious issue in about 20 years.

O. Kabyka: There is a system for collecting and utilizing solar collectors. The Quazar Company as a manufacturer is prepared to assume responsibility for the decommissioning and handling of end of life collectors.

Ye. Khlobystov: USELF provides recommendations on best practices

O. Borysova: EBRD has considered this issue and initiated cooperation with the Quazar Company.

V. Didyk: USELF is able to support specialized training programmes. The Programme is a technical instrument used by the Bank and has its own objectives. We work with developers. SEA can be carried out at the regional level. The Bakhchisarai District SEA is a pilot project. This issue should be initiated at the regional level. As regards the biogas projects, this issue is planned to be considered by the Verkhovna Rada in the nearest future.

D. Skrylnikov: Why the Bank uses the Green Tariff as a funding criterion. How other types of projects will develop? There are no incentives.

O. Borysova: Apart from USELF, the Bank has other instruments to support projects by releasing smaller loans (to develop individual heating and electricity schemes). As a bank, we need to generate revenues and we therefore support market-based projects. We are not able to provide social support.

Ye. Khlobystov: The Government should support renewable energy. In the Carpathian Region, rural settlements may remain without electricity for 2-3 weeks after a storm.

Ya. Shpak: Renewable energy projects are developed all over the world. One important issue we are facing is the lack of technical and design regulations for small hydropower, whereas such regulations exist for wind projects. It is very important to ensure that environmental impacts are assessed at a broader scale, and SEA should be initiated by local authorities. Any investor coming to the area will be able to obtain SEA information from local authorities and decide what type of project would fit best.

S. Syrotiuk: How much land is allocated for electricity transmission line? The arrangement where generated energy is used locally will help address this issue. Using electricity for heating is almost a crime. Water heated with a solar collector is naturally heated water. A solar plant owner will recover its costs within 5 years, and will be able to finance decommissioning costs in 20 years.

A. Voitsekhovska: We have to think about the future of our children and therefore start using biogas from wastewater treatment plants and landfills. Why not use methane? However, due to changes in legislation, investors are reluctant to finance biogas projects because they are not profitable without the Green Tariff subsidy. Mr. Matthew, have any estimates been made to determine which type of renewable energy is the most environmentally friendly and economically feasible?

Matthew Clegg: I can only provide a general answer. We have a similar scheme to support energy projects at wastewater treatment plants. Roof mounted solar panels are among the most successful renewable energy projects. The Government had to reduce tariff due to the lack of funding. Also, there are various community projects. Waste producers are responsible for the disposal of waste. Anaerobic digestion plants are widely used for energy generation. There is no single best method, we have a broad range of various renewable energy projects.

Ukraine Sustainable Energy Lending Facility (USELF)
Strategic Environmental Review

Public Consultation Meeting-1 (Round Table)

List of Participants

	Name	Organisation & Position	Contact Details
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7	Anatoly Pavelko	Environmental Investigation Bureau	
8	O.Ye. Rysin	Western Energy Transits	
9	L.Yu. Samura	Ecology – Law – Man International Charity Organisation, 9 Ivan Franko Street, Office 1A	
10	Serhiy Syrotiuk	Lviv National Agrarian University, Power Engineering Dept., Associate Professor	
11	D.V. Skrylnikov	NGO Environmental Investigation Bureau	032-2439632
12	Yaroslav Fedorovych Shpak	PEK Lvivschyna Association, Lviv / President	(032) 242-75-45, +380504315929
13	Natalia Ivanivna Shpeg	Ecology – Law – Man International Charity Organisation, 9 Ivan Franko Street, Office 1A / Legal Counsellor	E-mail: n.shpeg@epl.org.ua; (067) 679-02-44 (mobile); (032) 225 – 76 – 82 (office)
14	V.M. Shushniak	Regional Sustainable Development Agency	

Minutes of Round Table

V. Didyk What is the purpose of these consultations? What are the opportunities?
He presented the USELF Programme and emphasized that no EBRD funding was provided to date for any of mini HPP projects. Comments and remarks received during the meeting will be taken into account in the final report.

M. Khotuleva We should differentiate between the state-funded projects and USELF Programme

O. Borysova We have experience with HPP projects in Bulgaria, in the Western Balkans. We want to hear your concerns. EBRD's experience of working with businesses can be useful.

T.BiloshitskyI'm representing the Manivtsi Tourism and Sports Club and the Traveller's Club and Lemberg Tourist Agencies. The project donors have social responsibility, it is not as simple as just lending money and they are not the third party – they can't just say that we don't know what the money is going to be spent on. Speaking of 550 small HPP's, maybe it's a state programme but it's nonsense. Small hydropower developments are possible but each individual project needs to be discussed with environmental experts and – among others or even in the first turn – with tourist community and local residents, but definitely not the way it is done now when they are simply supposed to take these projects as a fait accompli. Public hearings are held selectively only for those who are interested in these projects. As we're talking about power plants that are being constructed now, construction activity is booming. The White Cheremosh River used to be a very popular rafting place falling under the difficulty category 3. This means that it is suitable for people without special training, i.e. those who are interested in leisure rafting. There were no tourists at all in this area last year. This is not because of power plant, which is already operational but because of roads being completely ruined by construction vehicles to the extent that the place can only be accessed by an off-road vehicle. In the past, about 20 thousand tourists used to visit the Cheremosh River only in May. People used to come from all over Ukraine, Belarus, Baltic Republics, and Russia. Tourists come to see the Carpathians and what they see instead are little monsters and ruined forest. And what we should say to these people? That this is temporary and because the construction is ongoing, please come in about twenty years when everything is restored. This is an absolute nonsense. Half a year ago, I would think that small HPP's are a good thing,I was taught at school that this is environmentally sound energy. But having examined this issue in greater detail, I've come to think that 90% of them are damaging to the environment, and only 10% might be feasible. All proposed plants are of derivation type. But there are technologies that are less damaging to the environment because only part of river channel is dammed and electricity is generated only during high flow periods. Each entrepreneur aims to earn money and we can't blame businessmen for not willing to address social issues, support schools etc. We have to establish conditions where commercial projects will not be able to make any harm to the environment. Thank you for your attention.

N. Shpeg It is interesting to listen to all parties to hear about pros and contras and try and balance them.

Ya.Shpak Of course, it is either rafting or HPP's. The Strategic Environmental Assessment (SEA) is needed to identify the most appropriate locations.

V. Holovnia There are two dams on the White Cheremosh River, both inherited after the Austro-Hungarian Empire. They are located on the Parkalaba River (one near the border point and another one near the Holoshiya Village), and they haven't hindered any rafting activities for a century.

Regarding the statement that trees are destroyed in many locations, this is not necessarily associated with the HPP projects. The fact is land for HPP developments is allocated without

tender, and people tend to take advantage of this, while nobody knows how each site is going to be used. In 2008, a very damaging flood occurred, and the Cabinet of Ministers commissioned our Institute to develop a flood control/prevention programme featuring two flood control dams on the White Cheremosh River. These dams will be empty and will obviously hinder rafting activities, but I think that the expected public benefit will outweigh inconvenience it is likely to cause to a small rafting community. This programme covers 5 Oblasts in Ukraine and involves the construction of 60 similar schemes. A feasibility study was carried out to assess whether these dams can be also used for electricity generation and it appears that about 40 hydropower plants can be developed. If we already have a dam, why not use for electricity generation, to meet at least on-site demand?

As regards 550 small hydro sites (330 in Zakarpattia Oblast), I've seen 1 project proposal. As an Institute responsible for the development of flood control measures, we have to review proposals submitted by hydropower developers in order to assess the potential for any adverse effects on our flood control schemes.There are proposals concerning the construction of 25 mini HPPs from Yasyn to Rakhiv. As you know, this section has the national railway line and motor road running on both sides of the river. The railway bed is only 2-3 metres higher than the water surface;it is not possible to construct anything there. I think that people simply try to take advantage of an arrangement ensuing from the Law of Ukraine on the Small Hydropowerwhere no tender is required to acquire a site for a small hydro plant – people use this opportunity to obtain a site and then change its designated use. This is just to demonstrate that it is not realistic to build 330 plants within one Oblast – we can only talk about 30-40 plants, not more. Thank you.

A. Pavelko Dams are planned to be constructed on the White Cheremosh River. You have to ask people living there whether they know anything about these plans. Projects and programmes are developed but local people know nothing about them; journalists and our colleagues were there and asked people whether they know about planned HPP developments. People would say that somebody arrived and brought pipes,stacked them and that's it. This is all information the locals would have. As regards consents received from village councils, we all know how this is done: a big boss from Lviv, Ivano-Frankivsk or Kyiv comes – this is a very important person for local people – and brings a piece of paper with a primitive drawing and says that an HPP will be built here. Various promises are made, like we will bring investments, we will construct roads etcetera, etcetera. They build an HPP, all promises vanish, no EIA in sight,and investors typically don't care to attend public hearings.This is an example how programmes are developed and how our much respected investors work here. This is a mere profanation and imitation of public consultation. It is very difficult for us to receive any information because neither investors nor regional environmental authorities would provide it. It is only after we've sent requests to all possible places, including the central ministry and Presidential Administration in Kyiv that they would send us at least something. Despite all legal provisions,the secrecy still prevails.

It is not possible to construct a large hydropower plant in this area because it would require higher head. The majority of proposed HPP projects in the Carpathian Region are of derivation type. As regards the above mentioned railway line,it is planned to be closed. The last point I would like to emphasise relates to the flood control dams.A very striking example is the Sniatyn HPP dam on the Prut River where flood flow spilled over the dam and run around its both sides; downstream villages were flooded as a result. Without a dam, the river would just carried flow downstream. Some time ago we consulted with the Swiss experts regarding potential flood control benefits of small HPPs. The conclusion was these benefits are minor to negligent due to small flow retention capacities. It is sad that investors try to present their electricity generation projects as flood control schemes and even receive state subsidies for this.

D. Skrylnikov How has this happened that we've changed our attitude from one of full support to the desire to declare a moratorium on HPP projects in the Carpathian Region within a very

short period of time? Perhaps, because of all these developments we are currently facing in the region. We can carry on theoretic discussions and research activities; I've personally seen 10 statements of intent and about 10 sites in the Carpathians where construction activities are ongoing. My colleague has a presentation on how these activities are carried out. Those mini HPP supporters that have recently visited the Carpathians understand how damaging can they be. What has caused this construction boom is the fact that these projects qualify for the Green Tariff. If the construction starts in 2012-2013, the highest tariff rate will apply. Nobody cares about research findings and impact on water resources and biological/landscape diversity; developers do everything what they can to start and complete the construction as soon as possible. What issues we already have? The degradation/loss of biological and landscape diversity, Carpathian rivers and ecosystems, and the Red Data Book species. The Black Cheremosh River is a protected hydrological site that suffers from the deterioration of water/habitat quality and environmental consequences of natural disasters. Scientists say that the construction of HPPs may have a knock-on effect on flood regime. Social factors: the Carpathian communities are against mini HPPs. We have social tensions; existing HPP sites do not maintain their fish passages in proper conditions.River channels often remain dry in low-flow periods. Derivation systems are often constructed using redundant gas pipes brought from all over Ukraine. Such practice discredits green energy.Existing derivation structures affect the aesthetic value of the Carpathians though this is exactly what people coming here are looking for. People come here for sports and tourism, not for hydropower plants. This is a unique area protected under various conventions, and this is why the idea of moratorium has emerged, and because existing land acquisition, design and construction practices are simply unacceptable. I believe that here we see good developers but before they complete all required permitting procedures all potential sites would be occupied by unscrupulous people whose main interest is to get hold of a piece of land. We are talking about criteria for identifying those sites where the HPPs could be developed.

S. Syrotiuk A derivation hydropower plant uses only 10% of available river flow, and this part of flow is diverted through the turbine. People are confused about what is what. Derivation plants divert only 10% of river flow, while HPPs with dams are a real disaster for the region.

O. Borysova I would like to make a small remark in order to lead our discussion in a constructive manner. EBRD supports alternative energy, and qualifying for the Green Tariff is one of requirements. I hope you know that the openness and transparency are among key requirements of the Bank, and all information about our projects is available on our website. We just think that you might use our practices to demonstrate that renewable energy projects can be implemented in Ukraine in a manner that is environmentally and socially acceptable. If we manage to formulate criteria for HPP projects, they could be taken into account by EBRD. If we have a formal request, we would be able to initiate a regulatory dialogue with the environmental and water management authorities. The Bank understands that hydropower is a complex issue not only in Ukraine. We have developed special questionnaires for the Western Balkans, and these can be also used in Ukraine. We have special additional requirements for mini HPP projects, and we are prepared to share our information and experience. To make sure that we have a productive dialogue, I would ask you to conclude your speeches/presentations with specific suggestions/proposals that can be considered by the Bank.

E. Khlobystov We are inviting you to formulate criteria for hydropower projects that could be used to decide whether a project can be funded or not.

N. Shpak I wouldn't like to hear things like 'if a couple of guys want to raft, this doesn't matter'. The life and health of every single person does matter.As regards technical issues, I would like to emphasise that I represent the Lviv Polytekhnika Polytechnic University, the only higher educational institution in the western region of the country where power engineers receive training; I've worked at the University for 33 years and never heard of anybody requesting the technical assessment of a small hydropower project.

As regards environmental issues, I haven't heard/read in the media about environmental consequences of hydropower developments in the Switzerland or Hungary, for example. If there is monitoring data characterizing these consequences – please show them to local people to learn and know about impacts on flora and fauna that have been observed over the past 5-10 years.

Coming to economic issues, all people want to earn money. But we don't have electricity deficit in Ukraine – on the contrary, we have cheap electricity generated by nuclear power plants and we even used to export it. Now we import energy instead of exporting it. As regards small hydropower in the Western Region and where construction can be possible. As an ordinary citizen, I support those people who protest against the construction of HPPs on the Cheremosh because it's a park area. But water level differences are highest there (8 m as compared to 2-3 m in Lviv Oblast and 5-6 m in Ivano-Frankivsk Oblast). This means lower cost of electricity generation. But we have to remember about future generations – we should not leave only destroyed mountains and dammed rivers after us.

T. Biloshitsky I'll provide some real data. We know that tourism means a lot for the Turkish economy – it accounts for 37% of the country's GDP. And we also know that the main attractions are sea, hotels and rafting! And this is much more than a couple of people as somebody says. During the 2008 flood I worked in a rescue team in the centre of flood-hit area. During that flood, 11 people were killed near the Sniatyn HPP site.We can or can't attribute it to the HPP operation, but this was the largest number of people lost due to flood in the district.And claiming that somebody is doing serious things while are simply rowing is absurd. I have 100 children in my club, and every summer we canoe along the Carpathian rivers. And children attend this club free of charge.

A. Pavelko There is a border station on the Perkalaba River. To reach the place, one has to cross the Cheremosh River twice, but it becomes non-accessible even after a slightest rain. There is a 20 km electricity line. They use a diesel engine to generate electricity during disruptions. A dam is already there, and the water level difference is 8 m. Why not built a small hydropower plant there to provide electricity for the border station instead of diesel engine that pollutes the air?

O. Rysin I'm involved in the land allocation process. It takes 1.5-2 years to allocate a site for an HPP project, and all relevant authorities and commissions are required to provide their findings and conclusions. As an example, we asked Mr. Holovnia and his Institute to assess the feasibility of establishing a power plant in a proposed location. We similarly asked environmental and water management specialists to provide their conclusions. We had at least two rounds of public hearings. I can agree that there may be cases where land allocation and public consultation processes are handled differently. But in practice the land allocation process includes public consultations when people are informed about a proposed development. If they oppose, a rural council would not grant its consent, and this decision is made by local deputies, not by the head of rural council alone. As regards a statement that HPPs limit rafting activities. We have to think about tourists and try and find a compromise. We can include special locks in the dam structure for rafters, or even temporarily stop the plant for the duration of the most popular rafting period in May. This will be a win-win solution. We should not categorically deny everything, we have to find compromise. There are over 600 HPPs in small Austria,some of them have been in operation since the start of the last century. We have to find a compromise and build HPPs because they are increasingly needed, first of all to support tourism in the Carpathians. We just have to take account of everything, i.e. fish passages, water quality requirements etc…

Ya.Ilchyshyn I'm grateful to the Bank consultants that they've an issue of strategic assessment. I represent an environmental NGO and would to reemphasise that Ukraine is party to various international conventions in the field of environmental protection, including the Carpathian,

Bern, partly Bonn and Aarhus conventions and other documents pertaining to the protection of the Dniester and Danube Rivers and the Carpathian Region. These conventions clearly define Ukraine's obligations regarding the protection of vulnerable species and landscapes. They also include provisions on various developments, including power engineering. These conventions recognize that the Carpathian Region is a unique environmental area in the European context, and any proposed developments should not affect the ecological balance in this area.The unique status of the Carpathian Region is also emphasized in the Ukrainian legislation and regional development programmes! According to relevant national programmes, tourism and environmental protection are priorities for the development of the Carpathians. We have to respect our current legislation and policies.

As regards the state environmental review process, I can provide examples of how the review conclusions are granted. The Black Cheremosh River is a locally protected hydrological site where any construction that may alter the hydrological regime is banned. However, power plants are built and positive state environmental review conclusions are issued for projects located within the site. The Law of Ukraine on the Red Data Book of Ukraine lists protected species that must not be destroyed because they are rare in Europe. The Law also specifies appropriate administrative and criminal sanctions for non-compliance. But the loss of 1 tonne of fish included in the Red Data Book of Ukraine in the Tour'ia Poliana village was sanctioned with a fine of UAH 27,000, which is cheaper than fish in a supermarket. This is either incompetence or negligence, or some non-transparent schemes. I have data provided by an Austrian specialist regarding environmental effects of HPPs in Austria. Fish appears to be severely affected. As regards flow availability.You claim that a small HPP uses only 10% or 30% of flow. Mountain rivers have a very special flow regime featuring two distinct periods, high-flow and low-flow. Estimates include the total volume of flow. During the high-flow period, sufficient volume of flow remains in the river channel, while during the low flow period all water goes to the pipe though 30%(according to the construction standard) of flow should remain in the channel. Businessmen benefit from the Green Tariff and they consider this 30% as lost profit. But there is no inspector to control compliance, and between conscience and profit people often choose profit.

I.Horban We have to find a constructive approach to hydropower development. We have to take into account in the design documentation potential changes in the hydrological regime, extent of habitat fragmentation, and potential impact on protected areas. We cooperate with the Lighting Technology Department of Ternopil University, where they examine the impacts of power engineering on various factors in the terrestrial ecosystems, including the levels of illumination. The Carpathian rivers are home to 30 rare fish species, including 14 species from the Red Data Book. After consultations with experts, we've come to a conclusion that small HPPs may have greater impact on common fish species. Changes in hydrological regime would affect species diversity and trophic chains (fish-otter-chiropterans). All Chiropteran species (30) are in the Red Data Book. Any issue can be minimized, but significant costs may be involved. Most importantly, the Government has signed many conventions, including the Bern Convention that deals with the conservation of landscape/biological diversity andhabitats.In small water bodies, introduced species will affect other species. The Carpathian ecological network is a core element of the European network, and projects implemented here should be environmentally safe.

E. Khlobystov I would like to ask speakers to suggest your criteria to decide whether a project should proceed. The Bank supports financially viable projects, and a clear system of criteria could help us to decide whether a project is feasible or not.

I. Hodzalo Mini HPPs have existed in the Carpathians for many years. Our young experts care about protecting the mountains, and we have to plan and design any projects very carefully. The Environmental Investigation Bureau suggests that our experts be involved in the review of proposed mini HPP projects.

O. Borysova We have many conventions andenvironmental review bodies, and our environmental legislation is considered as one of the best in the Eastern Europe, but why all this system does not work?

D. Skrylnikov Economics is a key driver, and the Bank is interested in profitable projects. I don't think we'll be able to reach a consensus. All concerns expressed by colleagues and even developers – this is not what the Bank wants to have in the end. In current projects, we do not evaluate those resources that are likely to be lost (landscapes, local history, visual amenity etc.). Tourist amenities are likely to be lost. As regards a suggestion to build a mini HPP at the border station for their needs, but this project is not going to be economically viable because the cost of Green Tariff is covered by the state.

Ya.Shpak The cost of Green Tariff is covered by the customers

D. Skrylnikov Only investors benefit from selling electricity to OblEnergo Companies at the Green Tariff rate, not household customers. If an electricity line is broken, customers could use an alternative source, but this is not the case now. My proposed criterion for the SEA: electricity should be sold to local customers and not mixed in the grid.HPPs are built in clusters to reduce connection cost and utilize existing infrastructure. If infrastructure is taken further away from the network, this will affect the construction of new lines. There were problems with another project where local residents would just destroy pillars.

O.Borysova And what's going on there now?

D. Skrylnikov Now they are relocating these pillars. There where we already have dams or impoundments and where flow is sufficient to meet the ecosystem demand, we can develop projects without adverse impact on the environment. As regards new locations where we have natural habitats and landscapes – ruining these in order to generate 'questionably profitable' electricity may cause larger losses than benefits. These projects would create very few employment opportunities or tourist attractions. If we compare economic benefits and potential losses, 80% of small HPP projects would appear unviable. Those locations where HPPs can be developed in the Carpathians are not commercially attractive because their main purpose should be providing an energy supply alternative to local residents.

O. Borysova Thank you for your suggestion.Dmytro is slightly stretching the truth because he knows that the Bank requires considering aesthetic impacts. This depends upon the level of a proposed project,we consider them as part of environmental and social assessment, audit and SEA. In the Bakhchisarai District SEA, this aspect has been considered as part of the assessment of ecosystem services.SEA is an instrument that helps use a series of other tools for evaluating ecosystem services. There is currently no niche for these instruments in our existing regulatory framework, whilst SEA does offer such niche. The Bank provides regulatory support and works with the national regulators to assess the desirable level of market penetration for alternative energy, which is reflected in the tariff. We provide instruments for evaluating these things, whilst it is the government who makes the decision. We are happy to see that our instruments are used effectively.

Ya.Shpak I'm involved in the Verkhne Synyovydne mini HPP project and able to answer all questions raised today. I just don't want that all things are mixed up here. If one unscrupulous businessman comes to a village mayor with a primitive drawing – this is not normal, but it has nothing to do with the system as a whole. I know how everything should be done, and no permission will be granted until after all services have granted their consent, including environmental authorities. Those unscrupulous people undermine the whole system and this practice is completely unacceptable. But this is a separate issue and it has nothing to do with the attractiveness of the Carpathians. Our Eco-Optima Company wants to enhance this attractiveness. You have raised two issues. The first is that hydropower affects the ecological balance – please quantify and detail this general statement. I do not disagree, but it requires

concrete justification. Fish is another issue, but there are technical solutions to deal with it. The Sniatyn HPP suspends its operations every year for the duration of the spawning period (2 weeks), it opens locks to release water and fish easily passes the site. I'm confident that any individual non-compliances during the design and construction cannot impede the hydropower development on the mountain rivers.

We work to mitigate effects on landscapes. The Striy River is partly dammed but the lower section is often flooded and riverbed is not stable. We plan to develop a project to close these dams. If there is a plant, an owner has to maintain the river channel in proper condition. A small reservoir can be established that could be used by tourists and local residents for recreation. There should be a spillway dam to let water flow further downstream. But we have to monitor the quantity and quality of water. All problems should be resolved on a case-by-case basis. People opposing to the construction of HPPs on the Carpathian rivers are not always objective in judging how much revenues these projects are likely to bring (for example, the net profit for Ivano-Frankivsk alone is estimated at 1 billion Euro which is absolutely unjustified). Even assuming that the tariff is UAH 1.00, we will receive UAH 100 million, and we have to cover operating costs, pay for water etc. Nobody says that for rural communities these projects could mean funding for their infrastructure improvements(10% of the project budget). The Green Tariff rate is lowest for small HPPs (UAH 0.84) and needs to be increased. The project payback period is 10 years. It would be quite difficult to find an investor prepared to wait for 10 years. Rather than rejecting the idea of developing HPPs, we have to consider each project individually.I agree that there are places where construction should not be allowed. Thank you.

V. Shushniak I don't understand why small hydropower in the Carpathians has attracted so much interest. Why not larger hydropower schemes?The Kavske Waste Management Facility at the Stebnykiv Chemical Plant was 80% completed when it was closed as a result of public hearings. And know we have a dangerous situation where mini HPPs are built by unprofessional people with little or no involvement of properly trained specialists. I understand that this is a big business, but mountains can suffer. I have extensive experience in studying the Carpathian mountains and rivers.

T. Biloshitsky Mr. Yaroslav, a section between Skole and Striy where you propose to build a plant is not suitablebecause it is regularly used for rafting.

Ya.Ilchyshyn A presentation on advantages and disadvantages of mini HPP projects: we typically spend 1.5-2 years to design a mini hydropower plant, while it may take up to 8 years in Austria with its huge experience in this area.The presentation has included a number of examples illustrating how mini HPPs are built in Ukraine, Austria and Germany.

The water quality index should be used as a criterion for assessment.

M. Khotuleva I had an assignment in the Altai Region where both developers and environmental experts worked closely to find the best possible option. In that case, the HPP construction was considered as a way to attract tourists. In the Bakhchisarai District SEA, interests of developers and tourist companies were similarly considered and assessed, and a mutually acceptable balance was reached. It might take longer than a few weeks for us to make a decision, but we can formulate criteria describing a good mini HPP. For example, a 30% minimum flow requirement can be also used as a criterion. We've also discussed an idea that electricity generated by renewable energy projects be used to meet the demand of local community first, and only excess electricity be supplied to the network.

This USELF Programme is linked to the Green Tariff, and we have to adjust ourselves to this requirement. But there can be other programmes with different requirements. It is not our mandate to decide whether mini HPPs should be developed or not, but we can formulate criteria to decide what HPP can be considered acceptable.

Ya.Ilchyshyn The Bank supervises its projects during the implementation phase, but it is not responsible for longer term consequences after the commissioning. They are not living here and therefore don't care. Other countries started to develop renewable energy projects in the 1990s as a cost-effective energy source. And now they regret that some aspects have not been taken into account. These projects have affected the natural environment. Apart from electricity generated for remote areas, they face a number of environmental problems, including the deteriorated water quality, and this is something money can't buy. And Ukraine is making the same mistakes.

We environmentalists are seen as the enemy. We do not oppose to the construction of HPPs providing that all requirements are met and locations are suitable to keep impact at minimum, but their number should be limited.

E. Khlobystov Thank you everybody for your attention and contribution. Please send your suggestions regarding the criteria for mini HPPs to the USELF Programme by e-mail.

ATTACHMENT F – SHPP CARPATHIAN SCREENING TOOL

During the Public Consultation period for the USELF Strategic Environmental Review, comments were received concerning the development of new run of river small hydroelectric power plants (SHPP) in the Carpathian Mountain region of Ukraine. In response to these comments, the USELF SER project team developed a screening tool (Table F-1) that assists with focusing discussions and planning of SHPP development. The screening tool emphases two critical aspects of good SHPP planning:

- Use of river and stream systems for recreation and other non-SHPP purposes
- Environmental impacts from small hydropower projects

The screening tool identifies the detail needed to establish criteria and boundaries for issues raised during the Carpathian public meetings:

- Data requirements accepted as standards
- Exclusion/eligibility criteria
- Guidance thresholds or measures
- Target outcomes

In addition to the screening tool, a process flow chart (Figure F-1) using the screening tool illustrates how interaction between SHPP developers, stream/river stakeholders, NGO's and interested parties lead to acceptable SHPP operations. This is only an example; other means can be used to incorporate stakeholder input into power plant and site designs, and into proposed operational practices. The key elements of a good process are:

- Seek and incorporate feedback from public interaction
- Provide good environmental data and impact/mitigation analysis
- Adjustment of SHPP design and/or proposed operations by the Owner/Developer

Table F-1
SHPP Carpathian Screening Tool
New Run of River Schemes

In response to request to provide examples and patterns of best practices in SHPP development relevant and applicable to Carpathian Region

Issue	Detail	Data	Exclusion / Eligibility Criteria	Guidance Thresholds and/or Measures	Target
Hydropower Operations	Establish rules of operation that acknowledge and address full range of environmental, habitat, and recreational needs and constraints for river water usage in balance with economic needs of facility.	Should be based on data detailing (where available): • Seasonal flow variability: daily, weekly, monthly, annual flow statistics, flow duration curve, flood and low flow frequency, etc. • Minimum flow releases per water quality requirements • Seasonal fisheries and habitat discharge and in-stream requirements Data is likely to be limited at strategy level, however it is envisaged that develops will have access to such data to inform viability to project	Negotiated or agreed to by river user groups government environmental regulations, etc	Include where feasible low flow release capability in turbine/generator design and bypass capabilities	See below for specific targets aligned with analogous European Union Member State Approach (Scottish Environmental Protection Agency, Scotland)
River Hydrology		No river specific data is presently readily available. If available, this data should be discharge records close to a site, within reasonable distance within the watershed, or developed stochastically. Records may be developed from short term sampling of stream flow or from old hydropower generation records from a site to be redeveloped.	• Protection of Low flows	No abstraction at a specified hands off flow typically Qn95 or Qn90 (1)	• Avoidance of dry channel • No significant reduction in channel wetted width unless natural low flow channel exists as part of stream reach.
	The base issue in relation to direct and cumulative effects.		• Protection of flow variability	Either: No extended period where downstream flow is + or <HoF; (% increase in flow downstream increasing with flow upstream = example: when Upstream flow = Qn30, Downstream flow = Qn80. (1) Or Shut down of scheme for fixed period at agreed frequency. i.e. 6 hour shut down at agreed period each week (may link in to ensuring flow meets requirements for other users) (1)	• Avoid extended periods of low flow downstream • No extension to natural Qn95 period

Attachment F, Table F-1
SHPP Carpathian Screening Tool

Issue	Detail	Data	Exclusion / Eligibility Criteria	Guidance Thresholds and/or Measures	Target
			• Protection of high flows	Max abstraction rate should be no > 1.5 x Qn30 (average daily flow) (1)	• Avoid downstream simplification of habitat • Maintain range of downstream river habitats dependent on geomorphologic processes
Habitat Fragmentation / loss of River continuity	Related to: Inter basin transfer; Installation of barriers to movement of aquatic flora, fauna and sediment	Limited data on distribution of fish species - suggest undertaken on a project by project basis - we can set out list of important fish species for Carpathian and Tisa basins and if lifecycle information is required give key migration periods. Data on sediment (geomorphologic) characteristics will also be very limited.	Protection of flows for migration and spawning of fish (a long distance and short distances of resident species). Protection of fish populations from death or injury from SHPP structures Provision of continued sediment transport and movement of other biota.		• Avoid loss of flow regime capable of triggering migration • Enable unhindered fish passage over/through natural and artificial obstacles/obstructions in the river • Provide sufficient flows for fish to progress upstream • Avoid significant disruption of sediment supply downstream of SHPP off take structure
Invasive species / new species	The source of invasive species has two main potential elements: • Inter basin transfer of water i.e. take off from one river and discharge to another; and, • Import of invasive species through construction practices	Limited data on how to assess this risk at strategy level	No Inter basin transfer of water (or screen for risks associated)	Set out generic guidelines on inter basin transfer: Review of potential for invasive species introduction through review of inter basin transfer fauna/flora lists Guidelines for construction in relation: Cleaning of plant and equipment before transfer of contractor facilities personnel and machinery Screening of imported construction materials for invasive species prior to movement to site	• No Introduction of invasive or new/non indigenous species
Impacts on eco tourism - rafting canoeing	Main concern of eco tourist groups is badly implemented hydropower which removes the flow they require for rafting activities EBRD want to see some additional baseline data on this the Ser at present only highlights that all water bodies are sensitive to hydropower.	Web search gives name of river and start and end point of tours - relatively simple to extract main rivers for rafting tours which are sold to international tourists	<u>Carpathian/Tisa Basin Rafting Rivers (2):</u> Carpathian rivers (Dnister & Prut Basins): • **Stryj**: from Turka to Zhydachiv Stryj River Rafting - www.raftingukraine.info .kml • **Svicha**: from Myslivka to the Dnister River; • **Limnyca**: from Osmoloda to the Dnister River (via Kalush and Galych; • **Prut**: from Vorohta to Chernovcy (via Jaremche) • **Cheremosh**: from Krasnyk to the Prut River (via Vyzhnyca) Tisa Basin Rivers: • **Tisa**: from Jasynia to Solotvyno (via Rahiv); • **Rika**: from Mizhgirja to Hust;	Specify downstream depth - guidance required for rafting (suggest this need to come out of Consultation through Fichtner) Expect variability based on discharge and river slope with a minimum depth usable for rafting and still within discharge capability of turbines at hydropower facility	• Avoid extended periods of low flow downstream during rafting season (April to Sept/October) • May conform to natural low flow periods.

Attachment F, Table F-1
SHPP Carpathian Screening Tool

Issue	Detail	Data	Exclusion / Eligibility Criteria	Guidance Thresholds and/or Measures	Target
			• **Latorica**: from Svaliava to Chop (via Mukachevo)		
Illegal gravel extraction			Protection of riverine gravel habitats	No illegal abstraction of river gravel for scheme construction	

Sources of information:
1. SEPA - Guidance for Run or River hydropower schemes – (Scottish Environmental Protection Agency - SHPP Developers guide)
2. http://www.raftingukraine.info/rafting/en/destinations.html

Attachment F, Figure F-1
SHPP Carpathian Screening Tool
Process Flow Chart