UKRAINE

Draft Market Readiness Proposal

PMR PA 9, Cologne

May 26, 2014
Outline

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Market Readiness Proposal
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OVERVIEW
MRP Objective and Focus

✓ Preparation for implementation of the post-2020 international climate agreement;

✓ Reduction of the carbon and energy intensity of the Ukrainian economy, paving way for securing Ukraine’s energy security;

✓ Economic stimulus to the industry for capital investments to the energy-saving technologies;

✓ Fulfillment of the European integration goals of the GOU and preparation for compliance with the expected EU-Ukraine Association Agreement.
MRP Objective and Focus

The MRP focuses on two key issues of improving Ukraine’s market readiness:

- The development of the Monitoring, Reporting, Verification of GHG emissions in Ukraine, and

- Preparation for an informed decision making process on the use of ETS and other MBIs for MRV in covered/not covered sectors.
# MRP Development Process

<table>
<thead>
<tr>
<th>Task</th>
<th>Team</th>
</tr>
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<tbody>
<tr>
<td>Project management and coordination</td>
<td>State Environmental Investment Agency of Ukraine</td>
</tr>
<tr>
<td>Development of Ukrainian Market Readiness Proposal</td>
<td>MRP Development Team (10 experts), as well as experts from UNDP, EBRD, USAID, EU TA projects and Working group on MRV Law Development</td>
</tr>
<tr>
<td>MRP Consultation Process</td>
<td>Stakeholder consultations</td>
</tr>
<tr>
<td>MRP Review</td>
<td>Internal and External Reviewers</td>
</tr>
</tbody>
</table>
MRP Development Process

During the draft MRP development, the SEIA organized the stakeholder consultations with:

- Representatives of the Parliament of Ukraine,
- Representatives of governmental bodies: Ministry of Ecology and Natural Resources; Ministry of Justice; Ministry of Finance; Ministry of Economic Development and Trade; Ministry of Energy and Coal Industry;
- Representatives of scientific and expert communities, business, and NGOs;
- Representatives of program management teams of the UNDP, EBRD, EU and USAID technical assistance projects.
## MRP Development Process

<table>
<thead>
<tr>
<th>DONOR</th>
<th>PROGRAM</th>
<th>PERIOD</th>
<th>Outputs of specific relevance to MRP</th>
</tr>
</thead>
</table>
| **EBRD**       | “Preparedness for Emissions Trading in the EBRD Region” (PETER)          | 2012-2015    | ✓ PETER phase I (2012-2013): Rationale, key challenges and logical framework of introducing ETS, review of ETSs globally, linking options.  
                |                                                                          |              | ✓ PETER phase II (2013-2014): assessment of carbon tax options for Ukraine, road-map for transition from carbon tax to an ETS. |
| **Germany** (UNDP/ICI) | “Capacity Building for Low Carbon Growth in Ukraine”                     | 2012-2014    | ✓ Legal support in development of a draft ETS law;  
                |                                                                          |              | ✓ Preliminary assessment of ETS design options;  
                |                                                                          |              | ✓ Assessment of data needs in installation-level data collection;  
                |                                                                          |              | ✓ Concept of Low Carbon Strategy for Ukraine. |
| **USAID**      | “Municipal Energy Reform Project”                                        | 2013-2017    | ✓ Main outcomes related to MRV system and MBIs are under discussion. |
| **EU**         | “Clima East”                                                             | 2015-2016    | ✓ Consultations, workshops, study tours, and training will be arranged on MRV for large industrial sectors and emitters and GHG reduction economic instruments for industry. |
Market Readiness Proposal
BB-1: The Big Picture. Country Context

1. General information about Ukraine;
2. GDP and Information about Economic Sectors;
3. Historical and Projected GHG Emission Trends, and Key Drivers;
4. Climate change mitigation objectives;
5. Institutional Arrangements.
General information about Ukraine

The largest country by area in Europe: 603.5 km²
The total population was last recorded at 45.7 mln people in 2012
GDP in Ukraine

Trends:
- recession during the 1990s
- growth from 2000 until 2008
- recession because of the crisis after 2008
- recovery in the first quarter of 2010 (GDP growth in 2010 - 4.3%)
- 0% grows in 2013

45th in the world according to 2008 GDP (nominal)
(nominal per capita GDP 3,900 USD)

15.1% decrease in Ukraine's GDP after 2008

Billion UAH (constant prices)
Historical GHG Emission Trends

The key drivers for the fall in emissions:
- economic crisis during the transition of the country to a market economy
- structural changes in the economy
- switch from liquid to gaseous fuels used for energy production

As of 2011:
- 76.1% CO₂
- 15.7% CH₄
- 8.0% N₂O
- 0.2% HFCs + PFCs + SF₆

929.9 MtCO₂e

401.6 MtCO₂e
GHG emissions by sectors

Total GHG emissions were mostly underpinned by emissions from the energy sector, which comprised around 76% of the total national GHG emissions. Between 1990 and 2011, GHG emissions from the energy sector decreased by 60%, driven mainly by a sharp economic decline in the 1990s and the decrease in the primary energy consumption.
GHG emissions projections

Commitments for 2008-2012

Commitments for 2013-2020

Forecasts

Doha amendment

Kyoto Protocol 1

Kyoto Protocol 2

EBRD forecast - status quo

EBRD forecast - planned policy

National forecast - pessimistic scenario

National forecast - base scenario

National forecast - optimistic scenario

actual emissions

www.seia.gov.ua
Institutional Arrangements

The Ministry of Ecology and Natural Resources - main authority on environmental protection issues and climate change policy-making.

✓ The State Environmental Investment Agency of Ukraine (SEIA) ensures the implementation of state policy on climate change. The SEIA activities are coordinated by the Cabinet of Ministers through the Minister of Ecology and Natural Resources of Ukraine.

✓ A number of national ministries and agencies as well as regional administrations and the National Academy of Sciences are involved in the development and implementation of climate change-related policy at the national and regional levels.

✓ Inter-Agency Commission on Climate Change (ICCC), 1999, includes representatives of the GOU and NGOs
BB-2: Policy Landscape, Objectives and Preparatory Work to Support and Inform Policy Decisions

1. Climate Policy Objectives;

2. Climate Sectoral Policy Objectives;

3. The Main Drivers for Introducing MBIs in Ukraine.
Mapping of domestic climate policies

**KEY DOCUMENTS**


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Mapping of domestic climate policies

- main driver for consideration of economic instruments
- increasing of security of the energy supply based on development goals of economy sectors not necessarily on climate policy objectives
- > 70% - energy sector
- energy-related programs play the key role for climate change mitigation
- enhancing of energy efficiency
- increasing the use of renewables and nuclear energy

- Energy Efficiency Program for 2010-2015
- Tax code introduced feed-in tariffs for renewables and carbon tax
National Energy Strategy until 2030

OBJECTIVES:
✓ to improve energy security and energy efficiency
✓ to meet energy demand
✓ to increase GDP through efficient development of fuel and energy complex
✓ to reduce man-made impact and ensure civil protection in the area of man-made security of fuel and energy complex

WEAKNESSES:
✓ recommendations are very general
✓ does not address financing issues
✓ concrete targets and timeframes are not defined
✓ absence of concrete mechanisms for stimulation of emissions

Realization of potential for energy efficiency and energy savings in industry and residential sectors

Development of renewable sources of energy

Elimination of natural gas import dependency though substantial increasing of domestic gas production (shale gas, coalbed methane, coal gasification)
Energy Efficiency Policy

International Energy Agency, review 2012

- Unrealized energy efficiency potential - 20-30% of energy supply
- Energy saving potential of Ukraine - 27Mtoe

National Energy Strategy

- Energy saving targets - up to 50% by 2030

Law on Energy Efficiency is under preparation

- Energy saving policies and measures in industry, transport, construction, agriculture, etc., as well as in interstate and international cooperation (Article 5 of the draft)

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Air quality, environmental and carbon taxes

- Environmental tax (replaced environmental fees for pollution in 2011)
- Voluntary payments by organizations and enterprises

THE STATE FUND FOR ENVIRONMENTAL PROTECTION

- Revenues are small compared to the financial needs of the power and industry sectors
- Spent on a variety of environmental issues (water, waste, environmental monitoring etc.)

CO₂ emissions tax:
- 0.22 UAH / tCO₂ (around 0.022 Euro) in 2011
- 0.24 UAH / tCO₂ (around 0.024 Euro) in 2012

stationary sources of CO₂ emissions mainly in power sector enterprises and processing industry (metal and coke production, chemical and petrochemical, cement, food industries)

CURRENT TAX RATE DOES NOT PROVIDE SUFFICIENT INCENTIVE TO REDUCE EMISSIONS
Experience with the use of market based approaches

- Joint Implementation – ERUs trading
- Trading of the Assigned Amount Units (AAUs) – Green Investment Scheme (GIS)

Issued ERUs, % (as of the end 2013)

- 41.72% Ukraine
- 58.28% Ukraine

250 Track 1 + 27 Track 2 JI projects

Major types:
- ✔ processing waste heaps
- ✔ reduction of \( \text{CH}_4 \) emissions from gas supply systems
- ✔ rehabilitation of heating and water supply system
- ✔ modernization of electric power distribution system
- ✔ energy improvements in industrial facilities

GIS projects
- energy efficiency (including thermo-insulation and energy efficiency improvements of public facilities), transport, renewables

Legal basis was established in 2006-2008
- ✔ supervisory body - SEIA

70% of total number
The Main Drivers for Introducing MBIs

✓ The positive results from implementation of JI and IET mechanisms;

✓ The strong institutional capacities, including GHG emission data verifiers and the GHG electronic register;

✓ Further extensive studies to establish the requirements and procedures at installations level for the introduction of MBIs are needed;

✓ The need to prepare Ukraine for constructive engagement in post-2020 global climate agreement and European integration;

✓ Additional complex studies are needed to estimate the exiting environmental tax system in Ukraine; and

The assessment of MBIs in Ukrainian context will help to define an optimal economic instrument to direct financing of GHG abatement measures through the most cost-effective, environmentally and economically feasible way.
BB-3: Core Technical and Institutional/Regulatory Market Readiness Component

1. Ukraine’s Current System for Estimating GHG Emission;
2. Assessment of the Current Regulatory Framework for GHG Monitoring and Reporting;
3. Sectors to be Considered for Coverage by the MRV System;
4. Additional Regulatory Needs for MRV System Implementation;
5. Deliverables and Timing.
Current System for Estimating GHG Emissions

There are currently three types of data reporting that are used for the estimation of GHG emissions and removals by sinks:

**National level data:** used for the national GHG Inventory, for example, statistical reporting;

**Sector level data:** mainly used to determine mitigation strategies and measures, partly also for the national GHG Inventory, for example, sector-related information of relevant ministries and agencies;

**Company-level data:** regular statistical data that is used to develop statistic reports for two levels: national and regional.
The National GHG Inventory System in Ukraine

Ministry of Ecology and Natural Resources of Ukraine
- Proposals for changes in legislation;
- Development of strategies to reduce GHG emissions and mitigate climate change as part of environmental strategy;
- Improvement of the national GHG inventory system.

State Environmental Investment Agency
Responsible for the National GHG inventory System:
- its planning and implementation
- organizing training and research activities
- collecting and archiving data
- QA/QC, placing on the GHG inventories;
- submission of GHG inventories to the UNFCCC.

Interagency Committee for the Implementation of the UNFCCC

National Center for Accounting of greenhouse gas emissions
Prepares GHG inventories

Government agencies (sectoral and regional)
State and commercial corporations
State and commercial companies
Research institutes
Private R & D companies
Independent experts

Data sources of GHG emissions and absorption
Contributors to the national inventories

www.seia.gov.ua
Draft Law for GHG MRV

National Competent Authority

- Carries out:
  - State registration of installations
  - Review and registration of the monitoring and verification reports
  - Appointment of independent expert organizations for verification of monitoring reports
  - Establishment and operation of an electronic database of GHG emissions reported by the operators
  - Approval of monitoring plans

Ministry of Environment

- Carries out state regulation of:
  - Implementation of the MRV system
  - Enforcement of compliance with the MRV requirements
  - Procedures for state registration of installations
    - Procedures for verification of monitoring reports by independent expert organizations
    - Monitoring plan requirements
    - Monitoring report and verification report requirements
    - Methodologies for measurements and calculation of GHG emissions units

Cabinet of Ministers of Ukraine

- Adopts procedures and regulations governing:
  - Implementation of the MRV system
  - Enforcement of compliance with the MRV requirements
  - Implementation of the MRV system
Flow diagram of the MRV system operation

1. Operator
2. Develop the monitoring plan
3. Approve the monitoring plan
4. Monitoring
5. Develop monitoring report
6. Monitoring report verification
7. Review and registration of the monitoring report and verification report
**Additional Regulatory Needs for MRV System Implementation**

- Procedures for *monitoring, reporting and verification* of GHG emissions;
- Procedures for *accreditation* of independent expert organizations which perform verification of reports on monitoring of GHG emissions;
- Procedures for *state registration* of the facilities emitting GHG in a MRV Database;

- **Methodology** for definition of GHG emissions for each of the types of activities included in the MRV system;
- **Monitoring plan templates** (with examples according to activity types), templates for simplified monitoring plan for installations with insignificant GHG emissions;
- **Templates** of report on GHG emission monitoring, templates of simplified monitoring report for installations with insignificant GHG emissions.
Additional guidance documents

✓ Example of standard procedure for organizing monitoring at installation level;
✓ General guidelines in GHG emissions monitoring and reporting;
✓ Guidelines in interpretation of installations’ activity types;
✓ Guidelines for lab testing frequency;
✓ Guidelines for sampling and samples testing;
✓ Guidelines for data management and data control system;
✓ Guidelines for estimation of uncertainty;
✓ Guidelines for utilization of biomass.
### List of key categories based on GHG emissions

<table>
<thead>
<tr>
<th>IPCC categories</th>
<th>GHG</th>
<th>Emissions in 2011, thousand tons of CO$_2$e</th>
<th>Percentage of total emissions in 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.A.1, 1.A.2, 1.A.4, 1.A.5 Stationary Combustion of solid fuel</td>
<td>CO$_2$</td>
<td>123 500.65</td>
<td>31.0%</td>
</tr>
<tr>
<td>1.A.1, 1.A.2, 1.A.4, 1.A.5 Stationary combustion of gas fuels</td>
<td>CO$_2$</td>
<td>93 351.73</td>
<td>23.0%</td>
</tr>
<tr>
<td>1.A.3.b Road transport</td>
<td>CO$_2$</td>
<td>30 620.91</td>
<td>8.0%</td>
</tr>
<tr>
<td>2.C.1 Cast Iron and Steel Production</td>
<td>CO$_2$</td>
<td>23 716.70</td>
<td>6.0%</td>
</tr>
<tr>
<td>4.D.1 Direct emissions from agricultural soil</td>
<td>N$_2$O</td>
<td>22 066.17</td>
<td>6.0%</td>
</tr>
<tr>
<td>1.B.1.a Coal production and handling</td>
<td>CH$_4$</td>
<td>21 565.38</td>
<td>5.0%</td>
</tr>
<tr>
<td>1.B.2.b Natural Gas</td>
<td>CH$_4$</td>
<td>19 557.00</td>
<td>5.0%</td>
</tr>
<tr>
<td>4.A Intestinal fermentation</td>
<td>CH$_4$</td>
<td>8 761.94</td>
<td>2.0%</td>
</tr>
<tr>
<td>1.A.1, 1.A.2, 1.A.4, 1.A.5 Stationary liquid fuel combustion</td>
<td>CO$_2$</td>
<td>7 166.06</td>
<td>2.0%</td>
</tr>
<tr>
<td>2.B.1 Ammonia production</td>
<td>CO$_2$</td>
<td>6 755.92</td>
<td>2.0%</td>
</tr>
<tr>
<td>6.A.2 Uncontrolled residential solid waste landfills</td>
<td>CH$_4$</td>
<td>5 768.13</td>
<td>1.0%</td>
</tr>
<tr>
<td>1.A.3.e. Other types of transport</td>
<td>CO$_2$</td>
<td>4 856.18</td>
<td>1.0%</td>
</tr>
<tr>
<td>2.A.3 Utilization of limestone an dolomite</td>
<td>CO$_2$</td>
<td>4 018.70</td>
<td>1.0%</td>
</tr>
<tr>
<td>2.A.1 Cement production</td>
<td>CO$_2$</td>
<td>3 839.93</td>
<td>1.0%</td>
</tr>
<tr>
<td>2.B.2 Nitric acid production</td>
<td>N$_2$O</td>
<td>3 231.26</td>
<td>1.0%</td>
</tr>
<tr>
<td>4.B Manure disposal, storage and utilization</td>
<td>N$_2$O</td>
<td>3 108.75</td>
<td>1.0%</td>
</tr>
</tbody>
</table>
# The Aggregated Deliverables

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Regulatory additional documents for introduction of MRV system for GHG emissions in Ukraine</td>
<td>Requirements and procedures at installations level for developing monitoring plan, preparing reports on monitoring GHG emissions, and verification of reports on GHG emissions monitoring by an independent expert organization.</td>
</tr>
<tr>
<td>2. Relevant Methodologies and Guidelines</td>
<td>To provide for reliable, successful and transparent functioning of the MRV system in Ukraine, detailed methodological guidance will be developed.</td>
</tr>
<tr>
<td>3. MRV database</td>
<td>Development of the MRV database, including inventory of installations and GHG emissions and initial support of its operations.</td>
</tr>
<tr>
<td>4. Training and capacity building activities for stakeholders on MRV system implementation</td>
<td>Training of NCA personnel in maintenance of the GHG emissions database. Training and capacity building activities for stakeholders on MRV.</td>
</tr>
</tbody>
</table>
BB-4: Planning for a MBIs

1. PART I - Assessment of Market Readiness;
2. PART II - Needs Assessment for MBI(s);
3. Deliverables and Timing.
Overview of planning and implementation of MBIs in Ukraine
PART I - Assessment for Market Readiness

Establishing low carbon development principles as one of Ukraine’s key strategic objectives

✓ In 2011, the Parliament of Ukraine approved the introduction of a tax on CO\textsubscript{2} emissions from stationary sources;

✓ Another option pursued by the GOU has been the introduction of a domestic ETS;

✓ Suitability of the sectors for inclusion in MBIs as well as their preliminary mitigation potential has been analyzed.
# PART II - Needs Assessment for MBIs

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. ETS design options study</strong></td>
<td>An assessment of outstanding design options for on ETS, focusing primarily on methodological and design issues for benchmarking and auctioning. Topical research into more detailed MBI options based on the results of the modeling and/or progress of MBI deliberations in Ukraine, including but not limited to scope, target/cap setting, legal definition of units, etc. will also be covered.</td>
</tr>
<tr>
<td><strong>2. Domestic offsets options study</strong></td>
<td>Recommendations on selection of appropriate mechanism(s), such as offset mechanism and new market mechanisms considered under the UNFCCC for sectors not covered by the MRV system in the initial phase (transport, waste, agriculture, LULUCF and others).</td>
</tr>
</tbody>
</table>
## Additional tasks required for the introduction of MBIs

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3. Economic impact assessment for ETS/other MBIs</strong></td>
<td>Modeling of the various MBI options (based on results of UNDP project as far as possible as well as on data collected under the MRV system to the extent available) for sectors covered by the MRV system as well as not covered by the system with regards to economic impacts</td>
</tr>
<tr>
<td><strong>4. Carbon Pricing Policy Decision Document</strong></td>
<td>Decision Document for stakeholders and policy makers shall be prepared, based on the outcomes and recommendations of relevant studies. Such document shall provide regulatory legal and economic assessment of the identified options as required by the Ukrainian law and shall be the essential tool for decision-makers on MBIs Ukraine.</td>
</tr>
</tbody>
</table>
BB-5: Organization, Communication, Consultation and Engagement

1. Organizational Framework for MRP Activities and Decision Making Process;

2. MRP Implementation Team;

3. Stakeholder Coordination and Consultations;

4. Outreach and Communication Strategy;

5. Deliverables and Timing.
Organizational framework for MRP activities and decision making process

VERHOVNA RADA (PARLIAMENT) of UKRAINE

CABINET OF MINISTERS of UKRAINE

NCA (SEIA)

MRP IMPLEMENTATION TEAM

Interagency Technical Working Group

Industries, NGOs, Ministries

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The MRP Implementation Team will consist of:

1. Division of GHG accounting in the SEIA (5 employees) and
2. Management Support Unit, financed by PMR (5 experts)
Stakeholder Consultation, Communication and Engagement

A multi-stakeholder Interagency Technical Working Group

- Increasing the capacity of the MRP Implementing Team;
- Facilitating the exchange of views among different stakeholders;
- Cover a wide range of stakeholders.
Outreach and Communication Strategy

Includes the following priority measures:

✓ Organizing broad consultations with stakeholders through series of meetings convened by the ITWG;

✓ Preparation of publications;

✓ Public Service Announcements in the form of promotional films broadcasting;

✓ A series of educational workshops and seminars for schools and universities.
## Deliverables

<table>
<thead>
<tr>
<th>Deliverables</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment of the MRP Implementation Team</td>
<td>Establishment of a Team for smooth implementation and coordination of activities and works identified within this MRP</td>
</tr>
<tr>
<td>Conferences and Workshops on MRV system, ETS and other MBIs</td>
<td>Perform capacity building activities especially for related public institutions and sector representatives and other stakeholders through conferences, workshops, study visits, etc.</td>
</tr>
<tr>
<td>Meetings, Round-tables, Seminars with related stakeholders for consultation of MRV system, ETS and other MBIs</td>
<td>Holding meetings, round-tables, seminars with private sector and public institutions in order to ensure successful MRV system development and preparation of analysis for ETS and other MBIs</td>
</tr>
<tr>
<td>Public Awareness Activities</td>
<td>Media activities, publications, promotional films/materials, broad public education and awareness raising activities.</td>
</tr>
</tbody>
</table>
BB-6: Summary of Activities, Timeline and Budget

Development of Regulatory Framework for MRV

- MBIs Analysis
- Study of Mechanisms for Sectors not Covered by MRV
- Start of Public Awareness Activities

MBIs Modeling Study

NCA Training

Start of Data Collection and Verification

Training/Capacity Building for Stakeholders

MRV Database Development

Engagement of Technical Experts and Consultants

Archiving and Storage of Relevant Information

Carbon Pricing Policy Decision Document

Working Team Establishment

BB-3
BB-4
BB-5
The overall budget need for activities outlined in the MRP and necessary for rolling out MRV and launching an MBIs is estimated at US$5 million.
Long-term mitigation targets and European integration context

CONCLUSION

✓ Preparation for implementation of the post-2020 international climate agreement;

✓ Fulfillment of the European integration goals of the GOU and preparation for compliance with the expected EU-Ukraine Association Agreement.
Thank you for your attention!

State Environmental Investment Agency

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