

Sustainable Bioenergy Value Chain Innovations

GEF Secretariat Review for Full Sized Project

Basic Information

GEF ID

10110

Countries

Ukraine

Project Title

Sustainable Bioenergy Value Chain Innovations

GEF Agency(ies)

EBRD

Agency ID

GEF Focal Area(s)

Climate Change

Program Manager

Ming Yang

Part I – Project Information

Focal area elements

1. Is the project/program aligned with the relevant GEF focal area elements in Table A, as defined by the GEF 7 Programming Directions?

Secretariat Comment at PIF/Work Program Inclusion

MY 10/15/2018

From the GEF Portal, the PM can see three agency-submitted documents. They all show the same endorsement letter. Please submit the PIF.

MY 10/23/2018

Not at this time. The submission is incomplete. For example, **G. Project Taxonomy**

on page 4, Rio Markers are not available. All projects in GEF7 need to apply the Rio Markers for Climate Change Adaptation and Climate Change Mitigation. Please address the following issues where applicable.

“Please apply, in the Taxonomy, Rio Markers for Climate Change Adaptation and Climate Change Mitigation. Each project needs to select one marker (0,1 or 2) for adaptation AND one marker (0,1 or 2) for mitigation. For further details, please refer to the hover tip that links to the complete Taxonomy, including definitions of the Rio Markers.”

“For each amount of indicative co-financing, please indicate whether the co-financing represents ‘Investment Mobilized’ or ‘Recurrent Expenditures’. For details, please refer to Paragraph 9 of the Co-Financing Policy (http://www.thegef.org/sites/default/files/documents/Cofinancing_Policy.pdf) and the Co-Financing Guidelines (http://www.thegef.org/sites/default/files/documents/Cofinancing_Guidelines.pdf).

“For any ‘Investment Mobilized’ indicated in Section C, please complete the relevant text box to describe how such ‘Investment Mobilized’ was identified. For further details, please refer to Paragraph 17 of the Co-Financing Guidelines (http://www.thegef.org/sites/default/files/documents/Cofinancing_Guidelines.pdf).”

MY 11/5/2018

Yes, the project is aligned with CCM 1-4: Clean Technology Investment and Development.

MY 11/9/2018

Not at this time. Please put your responses in the Agency Response Box below.

MY 11/16/2018

Yes, comments were addressed.

Agency Response

Taxonomy and Rio Markers have been applied.

Indicative Co-Financing has been classified as investment mobilized or recurrent expenditures.

Text box describing 'Investment Mobilized' has been completed.

Indicative project/program description summary

2. Are the components in Table B and as described in the PIF sound, appropriate, and sufficiently clear to achieve the project/program objectives and the core indicators?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Not at this time. Please

1. Simplify the project objective, using only one sentence only for it. Other information can be put in the text of project justification.

2. Put project output 4.4 as a project component and arrange specific budget for the new component.

MY 11/9/2018

Not at this time. Please put your responses in the Agency Response Box below.

MY 11/16/2018

Yes, comments were addressed.

Agency Response

1. In Table B, the objective has been simplified as:

“The proposed Project will promote investment in innovative bioenergy technologies and practices associated with the use of agricultural residues and waste by enabling and developing sustainable bioenergy value chains leading to significant greenhouse gas emissions reductions and in support of Ukraine’s target to increase the renewable share of total power production in the country.” The additional context is provided in the justification section.

2. In Table B, M&E is provided as a separate component with associated budget and co-financing. This is also reflected in Part II Project Justification, section “3) The proposed alternative scenario with a brief description of expected outcomes and components of the project” under Component 5.

Co-financing

3. Are the indicative expected amounts, sources and types of co-financing adequately documented and consistent with the requirements of the Co-Financing Policy and Guidelines, with a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Not at this time. Please revise Table C co-financing amount. The numbers in the Table are not consistent. There is a missing amount of \$1 million. This is the second time that PM comments on the missing number.

MY 11/9/2018

Not at this time. Please put your responses in the Agency Response Box below.

MY 11/16/2018

Yes, comments were addressed.

Agency Response

Table C has been provided in the PIF as shown below, with a total of US\$51 million from the EBRD in the form of loan, grant and in-kind, but an explanation of how “investment mobilize” has been identified for both loan and grant co-financing. We confirm that these numbers are the same as the total co-financing provided in Table B and in Table A, which are also US\$51 million.

GEF Resource Availability

4. Is the proposed GEF financing in Table D (including the Agency fee) in line with GEF policies and guidelines? Are they within the resources available from (mark all that apply):
Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes.

Agency Response

The STAR allocation?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. The total budget of the project (\$5,313,750) is within CCM GEF 7 STAR allocation (\$10.01 million). This is the first GEF7 project for Ukraine.

Agency Response

The focal area allocation?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. The total budget of the project (\$5,313,750) is within CCM GEF 7 STAR allocation (\$10.01 million). This is the first GEF7 project for Ukraine.

Agency Response

The LDCF under the principle of equitable access

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

N/A

Agency Response

The SCCF (Adaptation or Technology Transfer)?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

N/A

Agency Response

Focal area set-aside?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

N/A

Agency Response

Impact Program Incentive?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

N/A

Agency Response

Project Preparation Grant

5. Is PPG requested in Table E within the allowable cap? Has an exception (e.g. for regional projects) been sufficiently substantiated? (not applicable to PFD)

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes.

Agency Response

Core indicators

6. Are the identified core indicators in Table F calculated using the methodology included in the correspondent Guidelines? (GEF/C.54/11/Rev.01)

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes.

Agency Response

Project/Program taxonomy

7. Is the project/ program properly tagged with the appropriate keywords as requested in Table G?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes, on page 4.

Agency Response

Part II – Project Justification

- 1. Has the project/program described the global environmental / adaptation problems, including the root causes and barriers that need to be addressed?**

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes, on pages 4-7.

Agency Response

- 2. Is the baseline scenario or any associated baseline projects appropriately described?**

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes, on pages 9-10.

Agency Response

- 3. Does the proposed alternative scenario describe the expected outcomes and components of the project/program?**

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes, on pages 10-12.

Agency Response

- 4. Is the project/program aligned with focal area and/or Impact Program strategies?**

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. It is stated on pages 15-16.

Agency Response

5. Is the incremental / additional cost reasoning properly described as per the Guidelines provided in GEF/C.31/12?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes, it is stated on page 16.

Agency Response

6. Are the project's/program's indicative targeted contributions to global environmental benefits (measured through core indicators) reasonable and achievable? Or for adaptation benefits?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes, the target of mitigating 1.5 million tonnes of CO2 is conservative and achievable.

Agency Response

7. Is there potential for innovation, sustainability and scaling up in this project?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Not completed at this time.

For sustainability, please justify how the 20 demonstration pilot bioenergy projects will continue their operations after the GEF/EBRD project implementation period is over. Please tell readers how the operation and maintenance costs of the pilot projects will be covered.

For scaling up, please identify and justify how many similar bio-energy projects (and their power generation capacities) will be continually invested and deployed in the country in the next five-ten years. Talking about knowledge exchange, training, and the Project's central platform only is not enough for justification.

MY 11/9/2018

Not at this time. Please put your responses in the Agency Response Box below.

MY 11/16/2018

Yes, comments were addressed.

Agency Response

The following revised text has been included in section 7) “Innovation, sustainability and potential for scaling up”:

Innovation: The introduction of innovative technological and business solutions throughout bioenergy value chains is at the heart of the proposed Project. The Project will focus on accelerating investment in sustainable bioenergy technologies and practices with the intent to demonstrate how new investments to support the transfer of low-carbon technology and practices will result in emissions reductions. Overall participating private sector companies will expect to decrease their environmental footprint, increase resource use efficiency, in addition to the uptake of new technologies and innovation.

Sustainability: The Project introduces technologies and practices incentivised through a performance-based technology transfer financing mechanism. Capital expenditure on innovative technologies and the introduction of new business solutions will be made at the outset of the pilot sub-projects, which will continue for the lifetime of those sub-projects (estimated at a minimum of 10 years, which is well beyond the Project lifetime). Operation and maintenance costs are covered by the private sector partner (project owner), even for complex projects, as the EBRD does not usually finance these. Note that the sub-projects are selected based on bankability considerations, and the ability to finance O&M is part of that consideration.

Scaling up: Scaling-up is embedded in the proposed Project’s design, which is fundamentally a market transformation initiative. By identifying and working with the early movers, this Project provides entry points to developing the market and establishing the underlying biomass value

chains essential for the market to develop. The Project will make important contributions to identifying and demonstrating sustainable ways of turning agricultural residues in Ukraine into energy.

The investment is anticipated in at least 10 commissioned bioenergy value chain investment projects, with a total investment of US\$53.5 million including of USD 3.5 million from the GEF. Initially, this will produce a portfolio of successful and diverse bioenergy projects and lay a strong foundation for future investment activity. The scale of the sub-projects to be supported under the Project is consistent with other pilot initiatives involving green technologies supported by the EBRD in the energy sector in Ukraine in the past.

After the Project lifetime, in and beyond the next five to ten years, it is anticipated that similar bioenergy projects will be continually invested in and deployed in the country as it moves to achieve its Energy Strategy targets. Other financiers, specifically commercial banks, are expected to come in and finance similar projects. We anticipate at least three times the number of investment projects to be implemented within 10 years following project closure. The total realizable market potential of savings from bioenergy application in Ukraine within 10 years after the project completion is 90 MtCO₂ (based on cumulative energy potential of biomass of 39 Mtoe, equal to off-setting around 49 billion m³ in natural gas use for energy generation) out of which 45 MtCO₂ (600 MW biomass-based power generation capacity) is estimated to be scaled-up from the proposed Project.

To support scaling up, the Project's central platform for knowledge exchange under the SAF will encourage the sharing of information and best practices across sectors. The SAF will act as a voluntary collaboration platform for a broad network of stakeholders involved into the development of sustainable bioenergy value chains in Ukraine. Training materials, information resources and technical materials developed under the project will be made available after the project ends, both online and with a national entity to ensure availability post-project.

Beyond the initial impacts of the GEF Project, the proposed package of investment support, technical assistance, and knowledge sharing activities is envisaged to have a significant impact on the bioenergy market in agri-sector of Ukraine in terms of demonstrating financially sustainable bioenergy technology solutions. While reaching a critical mass will clearly require additional efforts from all the players involved, the proposed Project is a significant step in developing a whole-of-industry, self-sustaining biomass market that will enable the Ukrainian agribusiness sector to reach its full renewable energy potential.

Project/Program Map and Coordinates

Is there a preliminary geo-reference to the project's/program's intended location?
Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Not completed at this time.

If possible, please put the locations of geo-references of the 20 pilot projects.

MY 11/9/2018

Not at this time. Please put your responses in the Agency Response Box below.

MY 11/16/2018

Yes, comments were addressed.

Agency Response

The following has been included in Annex A of the PIF:

Pilot projects are anticipated in the following locations (geolocation ID number from geonames.org database):

710735, 698740, 703448, 700567, 689559, 702569, 696634, 706482, 709930, 695592

The following is short description of each site (with latitude and longitude of one point in each of the project areas):

Chernigiv (51.50551, 31.28487)

Odesa (46.47747, 30.73262)

Kyiv (50.45466, 30.5238)

Mykolaiv Oblast (47.41667, 31.83333)

Vinnysia Oblast (48.91667, 28.66667)

Lutsk (50.75932, 25.34244)

Poltava Oblast (49.47705, 33.81866)

Kharkiv Oblast (49.5, 36.5)

Dnipro (48.4593, 35.03865)

Rivne Oblast (51.0, 26.5)

Stakeholders

Does the PIF/PFD include indicative information on Stakeholders engagement to date? If not, is the justification provided appropriate? Does the PIF/PFD include information about the proposed means of future engagement?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. the indicative information on Stakeholders engagement is shown on page 17.

But the Agency needs to develop a comprehensive plan to engage the private sector in financing during the PPG stage.

Agency Response

Gender Equality and Women's Empowerment

Is the articulation of gender context and indicative information on the importance and need to promote gender equality and the empowerment of women, adequate?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. It is stated on pages 17-18.

Agency Response

Private Sector Engagement

Is the case made for private sector engagement consistent with the proposed approach?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. It is stated on page 18.

Agency Response

Risks

Does the project/program consider potential major risks, including the consequences of climate change, that might prevent the project objectives from being achieved or may be resulting from project/program implementation, and propose measures that address these risks to be further developed during the project design?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes. It is stated on page 19.

Agency Response

Coordination

Is the institutional arrangement for project/program coordination including management, monitoring and evaluation outlined? Is there a description of possible coordination with relevant GEF-financed projects/programs and other bilateral/multilateral initiatives in the project/program area?

Secretariat Comment at PIF/Work Program Inclusion
MY 11/5/2018

Yes. It is stated on page 20.

Agency Response

Consistency with National Priorities

Has the project/program cited alignment with any of the recipient country's national strategies and plans or reports and assessments under relevant conventions?

Secretariat Comment at PIF/Work Program Inclusion
MY 11/5/2018

Yes. It is stated on page 20.

Agency Response

Knowledge Management

Is the proposed “knowledge management (KM) approach” in line with GEF requirements to foster learning and sharing from relevant projects/programs, initiatives and evaluations; and contribute to the project's/program's overall impact and sustainability?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Not completed at this time.

Please double check if this project has addressed the following issues in KM:

Overview of existing lessons and best practice that inform project concept	Plans to learn from relevant projects, programs, initiatives & evaluations	Proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation	Proposed tools and methods for knowledge exchange, learning & collaboration (at both program and project levels if a PFD)	Proposed knowledge outputs to be produced and shared with stakeholders (at both program and project levels if a PFD)	Discussion on how knowledge and learning will contribute to overall project/program impact and sustainability	Plans for strategic communications
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A colleague of the PM argued that the project did not address the above issues in KM.

MY 11/9/2018

Not at this time. Please put your responses in the Agency Response Box below.

MY 11/16/2018

Yes, comments were addressed.

Agency Response

Existing lessons and best practices informing the Project: The proposed project builds strongly on the experience and lessons of the GEF-funded FINTECC Ukraine Project and the GEF-funded regional FINTECC initiative, which have produced a number of market assessments, methodologies and guidelines; and demonstrated successful approaches to knowledge sharing. The methodologies applicable to sustainable agriculture sector already developed within FINTECC Ukraine will be tailored and applied within the proposed Project. Existing networks will be used to the greatest extent possible, including the virtual networks setup under FINTECC

Ukraine. Key lessons learned from FINTECC have been incorporated including tailoring the financial mechanism to reflect the regulatory environment, institutional frameworks and market setting for climate technologies.

The Project has also been informed by other related initiatives in Ukraine, including the work by the EBRD with FAO on sustainable bioenergy feedstocks, which identified that crop residues have the most significant potential of all agricultural residues. Further lessons have been noted for the GEF-funded UNDP-led “Development of Commercialization of Bioenergy Technologies in the Municipal Sector in Ukraine (which focuses on municipalities rather than the private sector and addresses different feedstock) including the challenges related to mobilizing co-financing for investments; the need to develop standard products for potential clients; the need for appropriate technical assistance to complement investment in new markets; and the need to intensify outreach and document lessons.

Plans to learn from relevant projects, programs, initiatives & evaluations: The proposed Project seeks to maximise leverage therefore activities will, where possible, use support mechanisms and information from other initiatives, and link to other events and networks. In addition to leveraging learning from the EBRD-led projects in Ukraine (notably USELF and FINTECC), the proposed Project will liaise with ongoing associations (specifically the Ukraine Biomass Association) and project-based initiatives (e.g. UNIDO Cleantech). The intent is to encourage rapid development of networks through raising awareness via established channels in the country, before developing and offering a focused venue (virtual forum) dedicated to support the proposed Project’s key stakeholders.

Processes to capture, assess and document info, lessons, best practice & expertise generated during implementation: Knowledge management will be carried out throughout the proposed Project with the intent of generating and supporting interest from stakeholders in biomass supply chain investments. The Sustainable Agribusiness Forum website will be established as the virtual platform or knowledge marketplace for housing information, lesson and best practise; and also providing information and sources of expertise. A knowledge management consultant will support the execution of the knowledge management delivery model that is described below.

The Project will also explore opportunities to disseminate success stories through the UNFCCC Climate Technology Centre & Network. The Project will be assessed and evaluated through the regular monitoring and evaluation cycle of the GEF and the EBRD, including annual reports, mid-term review and final evaluation.

Proposed tools and methods for knowledge exchange, learning & collaboration: The following delivery model will be used for knowledge capture and exchange, learning and collaboration:

- Bioenergy success stories and case studies: to be prepared for each of the 10 commissioned bioenergy value chain investment projects. These will be made available on the SAF as they are produced, and stakeholder will be notified (through regular electronic circulars).
- Workshops and information seminars: To encourage information transfer, workshops and trainings/information seminars will be held periodically. The Project will link to existing /planned conferences to the greatest extent possible.
- Network: To support the identification and development of expertise related to sustainable agribusiness supply chain, an online network of biomass market players will be established and promoted. This will be supported blogs and social media. The primary purpose of the network is to foster policies and practices that support climate technology transfer.
- Course: To support and transfer project-generated expertise and best practices, a specialized course for professionals on sustainable agribusiness will be developed in partnership with key sector players and universities. This course will highlight best practices, technical expertise developed in Ukraine, and lessons learned during the Project's implementation. The course will embed knowledge gained through the project into national university-level curriculum. The bioenergy success stories and case studies will be inputs to the course.
- Related online information products: including Project-generated market assessments, guidelines, and sector roadmap, will be posted to encourage wide dissemination

Proposed knowledge outputs to be produced and shared with stakeholders: The key knowledge outputs will be:

- “Sustainable Agribusiness Forum” operational, which will be the main hub for engaging with stakeholders
- Instruments in place to promote the dissemination of key results and business models, including workshops and information seminars; online network; online information (case studies, market assessments, guidelines, and sector roadmap); and social media and blogs that focus on demonstrating successful case studies and increasing awareness of the economic and other benefits of bioenergy production
- Dedicated educational programme, with a specialized course on innovation in agribusiness and bioenergy practices, launched in cooperation with an Ukrainian university.
-

How knowledge and learning will contribute to overall project impact and sustainability:

Preliminary work on developing the knowledge network activities indicates that up to 70% of market players in agri-sector potentially available to implement agriwaste-to-energy projects will be reached through knowledge and outreach initiatives. Engaging these market players in knowledge and learning related on climate technology transfer will build professional capacity, publicize new developments in the field, and allowing stakeholders (both individuals and organizations) to exchange information and experiences. The network will also provide a forum for business leaders to discuss barriers to investing in bioenergy technologies. Overall, the Project's knowledge and learning activities will increase the level of attention on sustainable biomass value chains thereby enhance the Project's impact by create business

opportunities and ensure its sustainability by enabling the scale up of the similar projects in Ukraine.

Plans for strategic communications: The Project's strategic communications will focus on key stakeholders in the biomass energy supply chain in Ukraine. A social media campaign will be undertaken to communicate: latest knowledge products; videos produced (short film promoted on the EBRD's and other websites); project milestones and key events (social, knowledge, networking). All strategic communication will be overseen by the EBRD Communications unit to ensure consistency with EBRD and donor requirements.

Part III – Country Endorsements

Has the project/program been endorsed by the country’s GEF Operational Focal Point and has the name and position been checked against the GEF data base?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

Yes.

Agency Response

GEFSEC DECISION / RECOMMENDATION

Is the PIF/PFD recommended for technical clearance? Is the PPG (if requested) being recommended for clearance?

Secretariat Comment at PIF/Work Program Inclusion

MY 11/16/2018

Yes, all comments were addressed. The PM recommends technical clearance for the PIF.

CEO PIF Cover Memo for EBRD/Ukraine/Bioenergy project

Objective: To promote investment in innovative bioenergy technologies and practices associated with the use of agricultural residues and wastes in Ukraine.

Rationale: In its Nationally Determined Contributions (NDCs) to the UNFCCC, the government of Ukraine sets an overall target of keeping its countrywide CO₂ emissions below 60% of the 1990 level by 2030. Being aligned with the NDCs, the Cabinet of Ministers of Ukraine approved the Strategy of the Low Carbon Development of Ukraine up to 2050 on 18 July 2018. With that, decarbonization of the economy becomes one of the priority areas of the country. Recognizing the importance of use and further development of renewable energy resources, the government of Ukraine prioritizes wider use of biomass for energy, including acceleration of technological innovations in biomass conversion and integration of wider feedstock streams into energy production. The proposed GEF/EBRD Project will focus uniquely on developing sustainable bioenergy value chains by supporting interventions for the private sector, particularly SMEs to

invest in bio-energy. The proposed GEF/EBRD project will facilitate Ukraine to mobilize the private sector to invest in bio-energy and support the country to achieve the GHG emission reduction targets in the NDCs.

Alignment with CCM-1-4 strategy: Support countries to foster clean technology deployment, dissemination and transfer through entrepreneurship and private sector engagement.

Four Components: (1) Supportive regulatory and policy framework for bioenergy value chains; (2) Technical support for technology deployment for bioenergy value chains; (3) Deployment of financing products for bioenergy innovations; and (4) Enhanced networking, knowledge-sharing and visibility. With the above four components, the proposed Project will focus uniquely on developing sustainable bioenergy value chains by supporting interventions for the private sector, particularly SMEs. In particular, the Project will build agribusinesses' capacity in key supply chain elements: harvesting/collecting, pre-processing, quality control and storage. The lack of experience in the private sector regarding these activities is a key barrier to the development of a sustainable agri-biomass industry in Ukraine. Development of necessary regulations and standards (e.g. certification to ensure that the bioenergy products have the necessary quality in terms of contaminants, water content, etc.) will enable bioenergy value chains to be supported. New bioenergy value chain investment projects will be identified and developed through targeted technical assistance. New financing products will be established and deployed to support the implementation of bioenergy innovations. Awareness and knowledge initiatives will facilitate sustainability and scale up of bioenergy solutions and lessons learned.

Innovation: The introduction of innovative technological and business solutions throughout bioenergy value chains is at the heart of the proposed Project. The project will focus on accelerating investment in sustainable bioenergy technologies and practices with the intent to demonstrate how new investments to support the transfer of low-carbon technologies and practices will result in emissions reductions. Generally, participating private companies will expect to decrease their environmental footprint, increase resource use efficiency, in addition to the uptake of new technologies and innovation.

Sustainability: A focus on sustainability is embedded in the proposed Project's design, which is fundamentally a market transformation initiative. The project will make important contributions to identifying and demonstrating sustainable ways of turning agricultural residues in Ukraine into energy. Currently, there is a lack of a fully-functioning market allowing for efficient residues aggregation, processing and storage. By identifying and working with these early movers, this Project provides entry points to developing the market and establishing the underlying biomass value chains essential for the market to develop. After the project implementation period is over,

the revenue of power/heat generation and sales from the bio-energy technologies will cover the operation and maintenance costs of the assets that will be invested through this project.

Scaling up: To support scaling-up, the Project's central platform for knowledge exchange under the Sustainable Agribusiness Forum (SAF) will encourage the sharing of information and best practices across sectors. The SAF will act as a voluntary collaboration platform for a broad network of stakeholders involved into the development of sustainable bioenergy value chains in Ukraine. Training materials, information resources and technical materials developed under the project will be made available after the project ends, both online and with a national entity to ensure availability post-project.

Co-financing amount and source: The co-financing (\$51 million) comes from a loan of the EBRD to the national government.

GHG emission reduction: The global environmental benefit target is to directly reduce 1.5 million tonnes of CO2 equivalent during the lifetime (10 years) of the capital investment in bioenergy to power. The amount of indirect GHG emission reduction will be estimated at the CEO Endorsement Request stage.

ADDITIONAL COMMENTS

Additional recommendations to be considered by Agency at the time of CEO endorsement/approval.

Secretariat Comment at PIF/Work Program Inclusion

MY 11/5/2018

In the CEO ER stage, please submit details of identified stakeholders of the project, particularly the private sector stakeholders.

The GEF PPO made the following comment on targeted GHG emission reductions of the project:

"On core indicators Project documents report on indicator 6 as 1,500,000, while the Portal says "direct 1500000, indirect 4500000 " (which would mean a total of 6,000,000)"

The PM recognized the inconsistent issue. Fortunately, the information shown in the Portal "direct 1500000, indirect 4500000" is correct. The data in the Project document will not be

used by the public and the data will be revised soon by the agency in the CEO ER stage. As such, the PM recommends the PIF clearance without asking the Agency to change the data in the PIF. But the Agency needs to make sure to revise the data in the CEO ER stage.

Review Dates

	PIF Review	Agency Response
First Review	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>
Additional Review (as necessary)	<input type="text"/>	<input type="text"/>