

ANNEX R – PASSPORT TEMPLATE

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SECTION A. Project Title

[See Toolkit 1.6]

Title: ECO2 Renewable Biomass Fuel Enterprise

Date: May 3, 2017

Version no.: 01

SECTION B. Project description

[See Toolkit 1.6]

This project produces and sells a renewable solid fuel made from waste biomass. The renewable biomass fuel, called briquettes are a locally made fuel for cooking, manufactured from the waste products primarily from sugar cane factories. The primary waste product used to make the briquettes is bagasse. The production process is as follows: (1) raw bagasse is delivered from sugar cane factories and air dried in fields; (2) the dried bagasse is then carbonized (burned at high temperatures in low oxygen) in specially designed retort kilns (see photo below) which function to recycle and burn the gases (e.g. methane) from the heating process; (3) the carbonized bagasse is then mixed with various materials (molasses and water) and pressed into solid briquettes using a mechanical press; (4) the briquettes are air dried and bagged for sale. Based upon experiments, the briquettes light faster and burn longer than charcoal. The briquettes are intended as an alternative fuel to charcoal in the residential, business, and institutional sectors in the region of western Kenya. Eco2 will sell the briquettes directly to customers or to vendors. In addition to this, we will be exploring other production and distribution/installation mechanisms such as purchased franchises and small business loans.



The briquettes are expected to reduce the consumption of charcoal directly. These reductions are expected to be accompanied by reduction in charcoal production and sales, which may influence degradation of Kakamega Forest. Much of the sustainable development challenges faced by this region can be solved in part by changing fuel requirements and

providing jobs for community members.

The project will be managed by Eco2librium's Senior Manager, Chris Amutabi, and have oversight from Dr. Anton Espira (Field Director). Monitoring of all activities will be coordinated by Eco2librium's Monitoring Coordinator, Hardley Malema.

Estimated project start date: The project started on July 15, 2017



SECTION C. Proof of project eligibility


C.1. Scale of the Project

[See Toolkit 1.2.a]

Please tick where applicable:

Project Type	Large	Small
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	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
			<input type="checkbox"/>	x
			<input type="checkbox"/>	<input type="checkbox"/>

		<input type="checkbox"/>
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C.2. Host Country

[See Toolkit 1.2.b]
Kenya

C.3. Project Type

[See Toolkit 1.2.c and Annex C]

Please tick where applicable:

Project type	Yes	No
	x	<input type="checkbox"/>

Does your project activity classify as a Renewable Energy project?		
Does your project activity classify as an End-use Energy Efficiency Improvement project?	<input type="checkbox"/>	<input type="checkbox"/>
Does your project activity classify as waste handling and disposal project?	<input type="checkbox"/>	<input type="checkbox"/>

Please justify the eligibility of your project activity:

This project takes a waste biomass (bagasse from sugar production) to produce a renewable solid fuel to substitute for unsustainably produced charcoal. The renewable solid fuel is consumed to heat and cook food. This makes it a renewable energy project.

Pre Announcement	Yes	No
Was your project previously announced?	<input type="checkbox"/>	x
<p>Explain your statement on pre announcement</p> <p>The proposed project activity has not been announced previously without mentioning that it will be conducted as a carbon offset project. Please see the project decision timeline below for clarification.</p> <p>Project decision timeline:</p> <ul style="list-style-type: none"> • Pilot production and testing of product 2016-2017 • Local stakeholder consultation meeting was conducted in April 11, 2017 • MoU between Eco2librium and myclimate signed on ???? • Stakeholder report uploaded to Gold Standard registry on ???? • VERPA between Eco2librium and myclimate on ???? 		

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C.4. Greenhouse gas

[See Toolkit 1.2.d]

Greenhouse Gas	
Carbon dioxide	x
Methane	x
Nitrous oxide	x

C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type	
Regular	x

Pre-feasibility assessment	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
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		<input type="checkbox"/>	<input type="checkbox"/>
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If Retroactive, please indicate Start Date of project activity dd/mm/yyyy: ___ January 1, 2017

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

[See Toolkit 1.6]

	Coordinates
Latitude	0° 17' 17" N
Longitude	34° 44' 60" E

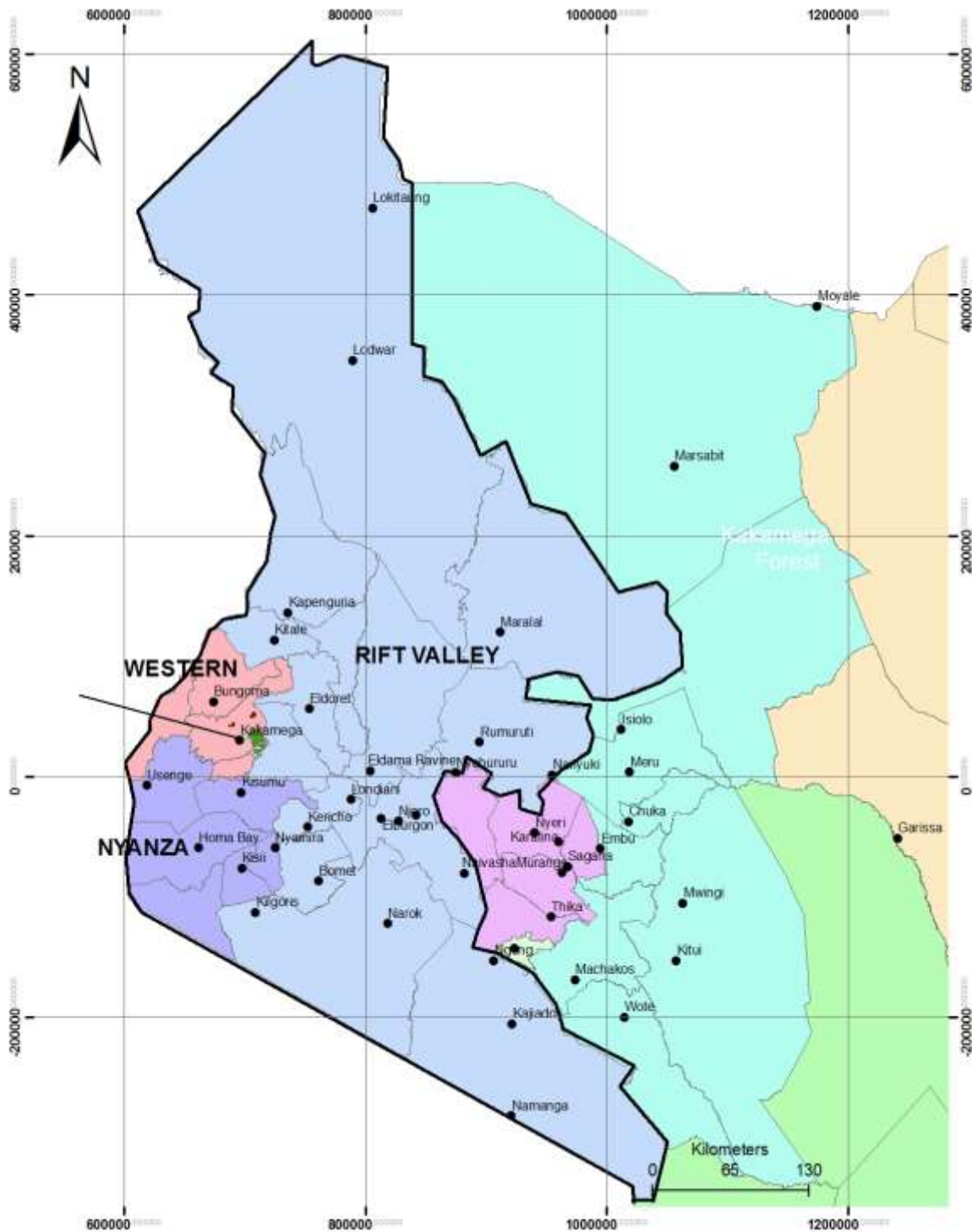


Explain given coordinates

The coordinates are the location of Kakamega town where ECO2 office is located and where all activities will be managed.

D.2. Map

[See Toolkit 1.6]



Project boundary highlighted in dark line and includes three provinces: Western, Rift Valley, and Nyanza. Most activities will take place within Western Province (gray counties) where Kakamega town is located (see line).

SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

[See Annex
J

Stakeholder comment	Was comment taken into account (Yes/ No)?	Explanation (Why? How?)
Safety precautions for workers	Yes	Safety for workers is important to Eco2 and we had numerous safety measures already in place (using gloves and face masks when carbonizing and pressing). We created a workers safety manual to formalize this.
Waste management of project	No	This project uses waste bagasse for its raw materials, thus we are using waste. But the excess bagasse is used for mulch for trees.
Sustainability of project to 2027 with regards raw materials other than bagasse	Yes	We are actively searching for other biomass waste to use as raw materials.
To benchmark with other companies operating similarly as briquette project	Yes	This was done prior to operations and during initial exploration, but will continue to do so.
With regards air quality and smoke from burning briquettes.	No	The tests that came later resulted in improvement of burning between when person making comment experienced briquette and now.
Hotels complained that briquettes took long to have meals cooked.	No	This was based on our early pilot tests with early recipes and the recipe has been adjusted to burn much hotter prior to LSC.
Fuel to run briquettes machine and pollution.	No/Yes	The fuel is gasoline (petrol) and there are no alternatives for these type of machines at this size. However, the plan is to buy a bigger machine after 2

Comments concerning safety of workers was taken into account, although we had already established measures. We used this opportunity to make it formal by making a worker safety manual. Comments with regards the product had already been recognized prior to stakeholder meeting and product was improved. Comment related to hiring both men and women was taken into account for this project, although it is already a priority for equal balance among genders at Eco2 (as our other carbon project, Stoves for Life provides income for 500 people about 70% of which are women). Comment related to benchmarks from other similar companies was recognized and we will continue to look for these companies, especially in areas further from Kakamega. Comments related to sustainability indicators were justified but we are unable to collect data on most indicators that would attribute change to the project. Continuous input/grievance mechanism was discussed among stakeholders and all found that phone calls were the most convenient as people live far away, although a book will also be kept in the office for input/grievances and checked by Eco2 staff.

E.2. Stakeholder Feedback Round

Please describe report how the feedback round was organised, what the outcomes were and how you followed up on the feedback.

[See Toolkit 2.11]

Eco2librium provided hard and digital copies of the stakeholder consultation report, revised PDD, revised Passport to stakeholders. Since Eco2 office is centrally located and most stakeholders are present in Kakamega (location of Eco2) at weekly/monthly intervals, these copies were made available here. For those stakeholders who could not easily visit Eco2 office, Eco2 provided them on line at our webpage. Stakeholders were asked to read the revised documents and provide feedback to Eco2 in writing or by email within 2 months upon receipt of the revised

documents or their availability. Eco2 reviewed the comments/feedback and made any necessary changes.

E. 3. Discussion on continuous input / grievance mechanism

[See Annex W]

Discuss the Continuous input / grievance mechanism expression method and details, as discussed with local stakeholders.

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	Justification
Continuous Input / Grievance Expression Process Book	Book with table 2.1 format is made available at the front desk of Eco2 office in Kakamega.	Kakamega is a central location for all stakeholders and most of them know the location of Eco2.
Telephone access	A specific number/Eco2 staff is made available for this aspect and this number is made available to all stakeholders.	All stakeholders, when asked about the continual input/grievance mechanism, said that phone was the best method for this process. Many stakeholders live very far from Kakamega and a phone call is much easier.
Internet/email access	We also have an	Although most stakeholders have

	general email address: info@eco2librium.com in which comments can be emailed.	limited access to internet and computers this is also made available.
Nominated Independent Mediator (optional)		

All issues identified during the crediting period through any of the Methods shall have a mitigation measure in place. The identified issue should be discussed in the revised Passport and the corresponding mitigation measure should be added to sustainability monitoring plan in section G.

SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

[See Toolkit 2.4.1 and Annex H]

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low, medium, high)	Mitigation measure
Human Rights			
1	No cultural change is required.	Low	Not needed
2	The production and use of new fuel does not result in any person's relocation.	Low	Not needed
3	The project produces and sells a renewable fuel made from biomass waste used for cooking. This does not result in any alteration, damage or removal of cultural heritage.	Low	Not needed
Labour Standards			
4	Workers have already established working groups and Stoves for Life will build their capacity.	Low	Not needed
5	All work related to production and sales is voluntary. No person or household is forced to make or buy fuel.	Low	Not needed
6	All workers are adults. No child labour is engaged for the production or the sales of the product.	Low	Not needed
7	Project works with already established groups which represent an underserved	Low	Not needed

	population, which are largely women and but will work with other groups to maintain standards related to discrimination.		
8	No hazardous materials are used for the production of the fuel. All materials are locally available. The construction does not involve any dangerous processes except for carbonizing the biomass waste, but training and safeguards will be put into place.	Low	Not needed
Environmental protection			
9	The project activity does not involve planting or agricultural activities nor the use of hazardous materials. Project promotes environmental protection.	Low	
10	No natural habitats will be converted or degraded. The materials used for stove construction are: biomass waste, molasses and water. The project promotes habitat conservation through reduced charcoal use.	Low	
11	The project is implemented by Eco2librium (a U.S. LLC) in collaboration MyClimate. The project is not prone to potential corruption opportunities.	Low	
Additional relevant critical issues for my project type	Description of relevance to my project	Assessment of relevance to my project (low, medium, high)	Mitigation measure
1	NA		
2	NA		
etc...	NA		

F.2. Sustainable Development matrix

[See Toolkit 2.4.2 and Annex I]

Insert table as in section D3 from your Stakeholder Consultation report (Sustainable Development matrix).

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
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Gold Standard indicators of sustainable development.	If relevant copy mitigation measure from "do no harm" –table, or include mitigation measure used to neutralise a score of ‘-’	Check www.undp.or/mdg and www.mdgmonitor.org Describe how your indicator is related to local MDG goals	Defined by project developer	Negative impact: score ‘-’ in case negative impact is not fully mitigated score 0 in case impact is planned to be fully mitigated No change in impact: score 0 Positive impact: score ‘+’
Air quality				0
Water quality and quantity				0
Soil condition				0
Other pollutants				0
Biodiversity				0
Quality of employment				0
Livelihood of the poor				0
Access to affordable and clean energy services		MDG 7: Ensure environmental sustainability	We will keep track, through sales, of the tons of renewable fuel that is sold.	+
Human and institutional capacity				0
Quantitative employment and income generation		MDG 1: eradicate extreme poverty:	We will keep track of all people receiving income from the production, distribution and sales of the fuel.	+
Balance of payments and investment				0
Technology			This project brought	+

transfer and technological self-reliance			the retort kiln to area and we will train at least 5 people in its use.	
Justification choices, data source and provision of references				
Air quality	<p>The production of the renewable fuel requires carbonization in kilns. However, these kilns are retort kilns designed in Europe to capture gases of carbonization and reburn for efficiency and cleanliness. The only gas of any consequence that is emitted from carbonization is thus water vapor.</p> <p>See http://charcoalkiln.com/adam-retort-improved-charcoal-production-system/ https://www.biocoal.org/adam-retort/</p>			
Water quality and quantity	<p>The production of the renewable fuel has no relation to water quality or quantity as only small amounts of water are used to make the fuel and no soil is eroded and the production facility is not near a water source.</p>			
Soil condition	<p>The production of the renewable fuel has no relation to soil condition, especially since soil was removed as an ingredient. The raw materials are bagasse and molasses which come as waste from sugar production. The fuel is consumed as a substitute to charcoal mostly in urban areas.</p>			
Other pollutants	<p>The production of the renewable fuel involves only biomass waste and water and produces no pollutants other than perhaps excess bagasse which is used for mulch.</p>			
Biodiversity	<p>The production and consumption of the renewable fuel may result in reduction in the use of charcoal which is made locally in the forest. This may have positive impacts on biodiversity through forest conservation, but this is difficult to measure and attribute to project.</p>			
Quality of employment	<p>This project will use a few workers in the production facility and will use established charcoal vendors as sellers of the fuel. Quality of employment is not expected to be affected as the workers did not have steady employment prior and the charcoal vendors already had jobs and we are substituting another product for them to sell.</p>			
Livelihood of the poor	<p>Although the renewable fuel is being sold at slightly reduced price compared to charcoal, this difference will not make a big difference to people.</p>			
Access to affordable and clean energy services	<p>Under baseline the fuel used is charcoal which is obtained from the forest and other outside sources and has been claimed to be unsustainable and cause degradation of forests and woodlands . This renewable fuel is cleanly made from biomass waste from sugar production locally.</p>			

	<p>GUTHIGU, P. AND J. MBURU. (2006) Local communities incentives for forest conservation: case of Kakamega Forest, Kenya. Paper presented at 11th Conference of the International Association for the Study of Common Property. Bali, Indonesia, 2006.</p> <p>Njenga et al. 2013. Charcoal production and strategies to enhance its sustainability in Kenya, in Development in Practice</p>
Human and institutional capacity	Although the sales of the renewable fuel will be made to all people regardless of gender and race, we will generally use those people that are already selling charcoal as a substitute.
Quantitative employment and income generation	<p>Project will provide income in sales of fuel in a region with poverty rates over 50%.</p> <p>KNBS 2015. Kenyan National Survey.</p>
Balance of payments and investment	No influence of balance and investment predicted.
Technology transfer and technological self-reliance	The technology transfer includes the use of a retort kiln in the producing of a fuel as a substitute for charcoal.

SECTION G. Sustainability Monitoring Plan

[See Toolkit 2.4.3 and Annex I]

Copy Table for each indicator

No	1	
Indicator	Access to clean and affordable energy	
Mitigation measure	NA	
<i>Repeat for each parameter</i>		
Chosen parameter	Number of tons of renewable biomass fuel sold	
Current situation of parameter	No tons of renewable fuel being sold annually.	
Estimation of baseline situation of parameter	Renewable biomass will be a substitute for consumption of charcoal.	
Future target for parameter	Expect the number of tons of renewable biomass fuel sold to be higher than baseline.	
Way of monitoring	How	Sales record
	When	Annually

	By who	ECO2 Monitoring Coordinator
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No	2	
Indicator	Quantitative Employment and Income Generation	
Mitigation measure	NA	
<i>Repeat for each parameter</i>		
Chosen parameter	Number of people receiving income from project	
Current situation of parameter	Project in area where poverty and unemployment is over 50%	
Estimation of baseline situation of parameter	No people receiving income from project	
Future target for parameter	Expect to provide income to 10 or more people	
Way of monitoring	How	Project finances showing number of people receiving income
	When	Annually
	By who	ECO2 Monitoring Coordinator

No	3	
Indicator	Technology Transfer and Technological Self-reliance	
Mitigation measure	NA	
<i>Repeat for each parameter</i>		
Chosen parameter	Number of people receiving training	
Current situation of parameter	Current technology of retort kiln construction and use is not present in area	
Estimation of baseline situation of parameter	No people with technology training and use	
Future target for parameter	Expect to provide training to 1 group annually	
Way of monitoring	How	Minutes/photos/comments from Training workshops
	When	Annually
	By who	ECO2 Monitoring Coordinator

Additional remarks monitoring

NA

SECTION H. Additionality and conservativeness

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This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

H.1. Additionality

[See Toolkit 2.3]

NA

H.2. Conservativeness

[See Toolkit 2.2]

NA

ANNEX 1 ODA declaration

[See Toolkit Annex D]

Eco2librium
106 N. 6th, #204
Boise, Idaho, 83702
USA

Kenya, Africa, May 3, 2017

Project: ECO2 Renewable Biomass Fuel Enterprise, Kenya

To: Gold Standard Foundation

Declaration of Non-Use of Official Development Assistance by Project Owner

Eco2librium

As Project Owner of the above-referenced project, acting on behalf of all project participants, I now make the following representations:

Dr. Mark Lung

I hereby declare that I am duly and fully authorised by the project owner of the abovereferenced project, acting on behalf of all project participants, to make the following representations on Project Proponent's behalf:

I. Gold Standard Documentation

I am familiar with the provisions of Gold Standard Documentation relevant to Official Development Assistance (ODA). I understand that the above-referenced project is not eligible for Gold Standard registration if the project receives or benefits from Official Development Assistance under the condition that some or all credits coming out of the project are transferred to the ODA donor country. I now expressly declare that no financing provided in connection with the above-referenced project has come from or will come from ODA that has been or will be provided under the condition, whether express or implied, that any or all of the credits [CERs, ERUs or VERs] issued as a result of the project's operation will be transferred directly or indirectly to the country of origin of the ODA.

II. Duty to Notify Upon Discovery.

If I learn or if I am given any reason to believe at any stage of project design or implementation that ODA has been used to support the development or implementation of the project, or that an entity providing ODA to the host country may at some point in the future benefit directly or indirectly from the credits generated from the project as a condition of investment, I will make this known to the Gold Standard immediately.

III. Sanctions. I am fully aware that under Section 10 of the Gold Standard Terms and Conditions sanctions and damages may be incurred for the provision of false information related to Projects and/or Gold Standard credits.

Signed:



Name: Dr. Mark Lung
Title: Executive director
On behalf of: Eco2librium