



# Renewable Energy Webinar Report

## Addressing Barriers to Clean Energy Adoption in Africa

5<sup>th</sup>/May/2020

9:00am East African Time



**Prepared by;**

**Development Revolvers Ltd**

**UWEAL Building, UMA Show Ground - Lugogo (Kampala)**

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**"Putting Research, Innovation and Technology First"**

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## Fore Word

Dear reader,

Cordial greetings from the Pearl of Africa and the team at Development Revolvers Ltd. We hope you are all well and resilient amidst the global COVID-19 pandemic. *“No elder in Africa invites and sits with his mates at a fire place and enjoy a bite of roasted meat because they lack food in their homes, but rather it is a gesture of unity, love, collective responsibility in problem solving, harmony and brotherhood.”* “An African proverb” .So thanks to all those who choose to partake of this African online meeting where we to dissected barriers to adoption of clean energy adoption in Africa. A core issue that cross cuts along all value chains. *Until lions have their own historian’s tales of hunt will always glorify the hunter. “The future of Africa’s energy poverty gap, can best be resolved by fixing the mis-match between the energy source, quality of technologies and mode of delivery to communities who predominately relay on Biomass for fuel as well as rudimental means of production value chains.”* As we continue to fight energy poverty let us ask ourselves always; Why does solid biomass continue to dominate in most African countries’ energy mix with firewood and charcoal contributing approximately 84% and 5% of the country’s? Why is there no clear sustainable energy source to cooking and lighting sought in most COVID-19 response plans by African countries yet the access to clean energy is a fundamental SDG amidst the biting energy and economic poverty? Let us think about the irony of most African countries still struggling with unaffordable and inaccessible power for domestic and commercial use yet we dream of industrial based economies? Why must we still think that the taste and smell of food has to only be good if we use firewood and getting us stuck to firewood? Do we even care about the 4million people dying annually as a result of indoor air pollution especially in highly concentrated areas with poor infrastructure like the slums? Has anyone bothered to care about floods in African countries while we depend on seasons to produce crops with all the water in Africa yet clean energy can be used to propel irrigation for agriculture?. Do we even care that mothers and children are losing lives at medical facilities during or before giving birth and operations because of lack of stable power source. Do we take time to think about how energy poverty has contributed to the raise in domestic violence cases given our patrilineal nature of African families not to mention the long distances women walk in search for firewood and productive time lost?

We pledge to walk with all value chain players on this long journey to see a transformed Africa through offering top notch business development services in a bid to foster resilient Energy SME’s and Cooperatives as well as all those entities in the Climate Change mitigation Ecosystem.



**Kusiima Alfred**

**Founder/Managing Director Development Revolvers Ltd**

## 1. Background

Globally about 4 million people die prematurely due to complication associated with indoor air pollution and now with COVID-19 pandemic which is a respiratory disease, it increases their vulnerability.(World Health Report)

African Governments through skilling and behaviour change initiatives supported by various development partners like Affordable LPG programme by Kenyan government implemented by The Global LPG Partnership – Kenya, The Green Charcoal projects supported by UNDP in Uganda, behaviour change program by the Global Clean Cooking Alliance for communities in Ghana and Uganda , NORAD through World Wide Fund for Nature support to clean cook stoves design and production and solar for light in Uganda, The affordable biogas installation programme for households by SNV in Uganda, GIZ EnDev programme of empowering artisans in Africa portray increased growth in acceptance of social and behaviour change practices in adopting clean energy amidst challenges. However Solid biomass continues to dominate their energy mix with over 84% of firewood and charcoal use as well as traditional methods of lighting like kerosene lanterns in most African rural homes.

Against this background Development revolvers Ltd together with The Federation of small and medium and small sized enterprises, Ghana Alliance for clean cooking, Renewable energy civil society network of Uganda, Eco-Group Ltd with cooperation of lead persons from the Global LPG Partnership (GLPGP) and Department of Environmental Management, Makerere University organised a webinar under the theme *“Addressing barriers to clean energy adoption in Africa”* on 5<sup>th</sup>/May/2020 that attracted 33 participants a cross Africa. The participants were drawn from energy cooperative members, policy makers, academia, producers of clean technologies, distributors of clean technologies, government representatives from various countries, civil society organisations, development partners and umbrella organisations to collectively find turn around strategies to the barriers affecting acceleration of clean energy in Africa.

The webinar discussion presented a platform to share Africa’s challenges and mechanisms of fuelling adoption of clean energy technologies and how Africa can leverage on the unexploited opportunities while saving lives, conserving environment and improving standards of living of households through income generation.

The webinar discussion set a tone to policy makers, business development service providers, financing agencies, donor representatives, Academia, technology producers and others in the Renewable energy value chain and triggered change in perception and conclusive new approaches towards mechanisms for making Renewable Energy solutions affordable and accessible. Thirst to propelling research and development, sourcing for innovative funding options and support to viable businesses, harnessing institutionalisation of all clean energy member based institutions to have a common voice, sustainable use of biomass while placing alternative energy sources was placed at the top of the agenda. A call to government agencies to be accountable and fight corruption in the clean energy value chain especially law enforcement, monitoring, implementation and coordination legal frameworks were emphasised by the various participants from across the globe. The African mother whose life is at the frontline while facing consequences of indoor air pollution from their cooking places will now be turned in to opportunity through the innovative business operation mechanisms where every point of sale is an enterprise using local structures like local leaders at the front. It is no doubt that recommendations in this report must translate in to actionable pointers if Africa’s barriers to adoption of clean energy have to be turned around by all key actors.

## 2. Key Objective of the Webinar

A well informed and mobilised clean energy movement, generating resources together and driving an equitable and sustainable climate change mitigation agenda through propelling clean energy acceleration in African communities.

## 3. Key Takeaways from Presentations Made by Panellists

### 3.1 Synopsis of the African Perspective on Renewable energy;

Sharing on the African perspective on Renewable energy situation in (East) Africa with emphasis on energy access and efficiency for cooking, lighting and commercial production though Hydro is playing a bigger role and most prioritized in human development, focus was placed on;

- What has worked and where in Africa?
- How come it worked there than other countries in Africa (general)?
- Key references for further reading
- About RECSO, UCSD and INFORSE East Africa (*A Power Point Presentation is attached*)

### 3.2 Sustainable Charcoal Industry in Africa a pipe Dream or Possibility?

A situational analysis of the current demographics was shared to paint a picture on the potential for sustainable charcoal production through effective governance of the value chain. Environmental implication of the current informal charcoal production trends across Africa was emphasised and the policy considerations for sustainable charcoal production in the event that it is done as business and well invested in especially formalising the charcoal production industry. It must change from charcoal dealing to Charcoal investment. (*A power point presentation is attached*)

### 3.3 Challenges of the clean energy technology producers and distributors affecting uptake in Africa

Sharing about her walk of life in innovation and developing eco-friendly cook stoves among other interventions, the Managing Director Eco – Group Uganda Ltd expressed concern on perception of the communities towards clean technologies. Pricing was one of the challenges in the sector where clients wish to buy what is cheap and not being mindful of the quality. This jeopardized business for sector players. Change of behavior by users and potential clients has been and continues to be a challenge as many seemingly still believe there are other options regardless of the evident effects of climate change to the environment. Donor focus has equally so much been a challenge where many have their funds targeting particular issues along the value chain yet first things would be coming first to support the clean energy technology service providers. Awareness creation strategies in place haven't solved much in terms of creating and driving potential users and clients to take on clean energy technologies. Different strategies appeal to different client's especially rural based dwellers who need to be well understood. Marketing strategies in use are still not meeting the standards or clients expectations. No assurance for payment from most client's especially if systems are not institutionalized. This was evident to Eco-Group Ltd when they piloted the pay as go approach which left them in a huge debt burden as some clients relocating to new residences. Delivery mechanisms remain an issue. While clean energy distributors wish to keep client's by meeting their delivery costs, delivery costs get so high that delivery isn't something to undertake yet the companies have to pay their over - heads.

### 3.4 Renewable Energy enterprises Survival after COVID-19

The Executive Director Small and Medium-Sized Enterprises-Uganda who is a long serving economist drew attention of participants to how they can produce affordable technologies but also increase production and productivity. Financing for energy SME's and Cooperatives remains key. The nature of doing business requires more bondage to influence energy uptake, the sector needs entrepreneurs not just those doing it for passion. Willingness of clients to buy remains key as well as having capacity to pay. Business viability needs to be key to impress financiers in Micro finance institutions. Sharing with participants on managing post COVID-19 Challenges, it was clear that collective approach to accelerate clean energy uptake was key though producers needed to do more to give clients reason to buy as many will be saving their money. Value addition remains a top priority for producers, creative in marketing and delivery mechanisms, financing mechanisms needed to be well studied as well. Right policies need to be in place and pushed in collectives though producers should be keen on borrowing. More advocacy is needed to propel adoption.

### 3.5 Accelerating LPG Uptake in Africa. The Kenyan perspective

After Kenya placing a ban on logging, LPG adoption in Kenya was championed by government with the regulatory and law enforcement on illegal gas re-fillers brand quality for various clean energy suppliers and monetizing gas. Customer's perception needed to change, access problem sorted especially in refilling and safety during delivery and use. She equally shared on the advantages of using LPG which should be educated to potential users. Kenya had addressed issues of taxation on LPG, government is playing her role on regulation and enforcement of the guidelines, consumer education is a key priority and financial institutions have appreciated the LPG industry as a place for business so they support the players. With this Africa can equitably take on LPG. (A Presentation is attached)

### 3.5 Cooperatives as agents of last mile distribution of Renewable energy solutions – The case of Ghana

Ghana's experience isn't different from other African Countries. Clean energy access stands at 25.8% for LPG, 70% predominately on biomass, 1.1% for E-Cooking. Clean energy use is at; Biomass 39.2% electricity 13.8% LPG 46.85%. General deployment of clean energy national level is at 23.3%. The history of Cooperatives is traced since 1966 though new alternative social economic mobilization synergies have been established like community based organizations, civil society organizations, agribusiness working groups, Ghana institute of home economics, restaurant associations, saving and credit cooperative Organisation. Through the Ghana cook stove alliance advocacy has been pursued, market survey's to propel clean cooking adoption. Ghana has equally made the clean cooking technologies affordable, the producers have equally made efforts to deliver the clean energy technologies to the communities. Ghana continues to work with various supporting agencies like the Clean Cooking Alliance in areas of behavior change to accelerate uptake for clean energy technologies.

#### 4. Reactions from participants across the globe and Recommendations

No	Reactions/comments	Recommendation
1	<p><b>Policy, Regulation and Legal frameworks</b></p> <ol style="list-style-type: none"> <li>Cooperatives from practice seem to be creating political centers and that seems not feasible</li> <li>Concern was drawn to the accessibility and sustainability of the energy source by many potential users</li> </ol>	<ol style="list-style-type: none"> <li>African countries must take stock of the regional policies on clean energy</li> <li>All Actors must place Environmental degradation on top agenda of their implementation frameworks</li> <li>Favorable Tax regulation regimes specially for cooking technologies must be set</li> <li>Zoning is key for agroforestry while promoting another alternative like LPG</li> <li>Clear regulatory mechanisms should be put in place if Africa is to score on clean energy acceleration</li> <li>Functional structural legal frameworks must be enforced</li> </ol> <p>Research, Development and innovation must be a key take for lead institutions in R&amp;D</p>
2	<p><b>Tapping in to Behavior Change Concerns</b></p> <ol style="list-style-type: none"> <li>African countries rely on one source yet there are other off grid alternatives</li> </ol>	<ol style="list-style-type: none"> <li>E-Cooking must be a source to explore but also train users at home like house helpers.</li> <li>Quality of energy sources must be worth the value to the client to motivate a shift to clean options.</li> <li>It is important to diversify our energy options is key</li> <li>Need to bring on board low income earners in to the matrix</li> <li>Cooking behavior by people in communities should be something localized using local approaches and made mandatory</li> <li>An energy mix rather than reliance on one sources of energy should be a priority for every one</li> <li>Safety issues need to be taken in to consideration</li> <li>Public energy literacy especially on efficiency, energy as an income generating activity and Health concern will trigger uptake</li> <li>Clean Energy technologies must be made Affordable to all of by African governments</li> </ol>

No	Reactions and Comments	Recommendations
3	<p><b>Last mile Delivery Mechanism</b></p>	<ol style="list-style-type: none"> <li>1. Cooperatives especially saving and credit cooperatives must be embraced as a vehicle for clean energy acceleration</li> <li>2. Local community Skilling and training must be a top agenda item if design and production has to facilitate access to clean technologies</li> <li>3. The role of CSO's CBO's and Associations must be seen scoring in last mile service delivery initiatives in all African Countries</li> </ol>
4	<p><b>SME's and Cooperatives Capacity Building</b></p> <ol style="list-style-type: none"> <li>1. The Energy players are not Investor ready to attract good financiers</li> <li>2. Concern is drawn to NGO's in Africa placing emphasis to energy access than efficiency</li> </ol>	<ol style="list-style-type: none"> <li>1. Private sector players must explore agency marketing models and partnerships that propel uptake and last mile distribution of the technologies</li> <li>2. Private sector needs to trigger financial institutions to explore financing models and sources that answer the energy poverty constraints in Africa</li> <li>3. The communities need to see the opportunity cost between charcoal production verse agriculture production and find a symbiosis approach to ably have an integral solution.</li> <li>4. Attention must be drawn to Business Development Support for SMEs and Cooperatives in Energy and those in the Ecosystem for investor preparedness if access to finance has to be achieved.</li> </ol>

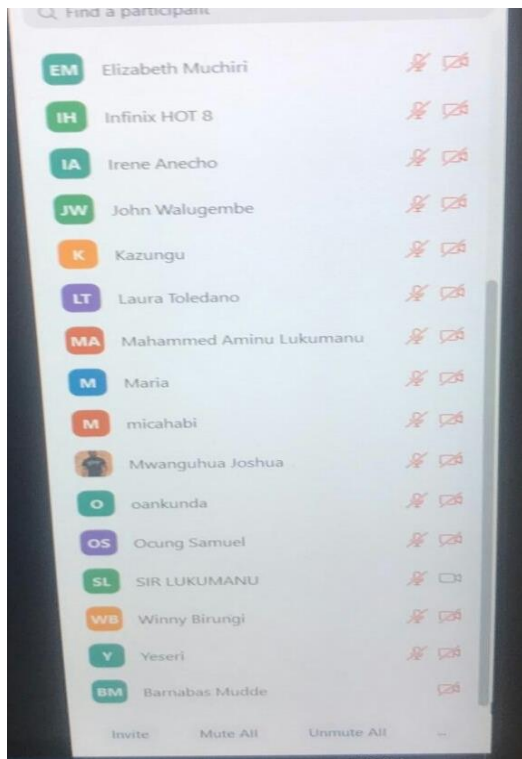
## 5. Conclusion

These recommendations informed by the participatory engagement of participants from a vast range of expertise across the globe must trigger new efforts towards addressing energy poverty in Africa together. The turnaround strategies can be drawn but without placing the end users at the centre all efforts by the various players like Faith based organisations, CSO's, Development partners and government ministries, departments as well as agencies across Africa our efforts will be put to waste. A joint action plan must be sought to answer barriers to clean cooking adoption in Africa and it starts with you being the first covert to clean energy use.



## 6. Appendices

a) Some Comments and Participants engagement submissions.



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[benardmbaine1992@gmail.com](mailto:benardmbaine1992@gmail.com)  
From Antonny Tugaineyo to Everyone: 04:08 PM  
[tugaineyoantonny@gmail.com](mailto:tugaineyoantonny@gmail.com)  
From Kihumuro Phillip to Everyone: 04:15 PM  
Cooperatives means many power and decision making centres which may not not be a good take for our political settings  
From Irene Anecho to Everyone: 04:23 PM  
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I only open it when I want to say something  
From Me to Irene Anecho: (Privately) 04:24 PM  
Noted  
From Kihumuro Phillip to Everyone: 04:26 PM

and we share with you these correspondances. Thanks  
From Irene Anecho to Everyone: 07:15 PM  
[iiryn444@gmail.com](mailto:iiryn444@gmail.com) Irene  
From micahabi to Me: (Privately) 07:15 PM  
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Senior Lecturer Mubs 1:17 pm

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Consultant Agriculture and Rural Development, African Development Bank 1:19 pm  
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I must say it was very informative and yielding. looking forward to another next time thank you so much  
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[+256 772395534](tel:+256772395534) Ocung Samuel  
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**b). Agenda for the Webinar Discussion**

<b>Time</b>	<b>Activity</b>	<b>Responsible</b>	<b>Institutions</b>
08:50am	Joining of the meeting	Rev. Gad Mugisa	Doctoral Student at Asian United Theological University – Korea
09:00- 09:10am	Preamble	Kusiima Alfred	Managing Director –Development Revolvers Ltd
09:10am- 09:30am	Synopsis of the African Perspective on Renewable energy	Kimbowa Richard	-Chairman -Renewable energy CSO's Network (Uganda) - Chairman- International Network for sustainable Energy in East Africa
09:50am- 10:10am	Sustainable Charcoal Production in Africa, A pipe Dream or Possibility	Dr. Patrick Byakagaba	Lecturer, Environmental and Natural Resource Governance, Department of Environmental Management Makerere University - Uganda
10:10am -10:30am	Challenges of the clean energy technology producers and distributors affecting uptake in Africa	Rose Twine	Managing Director, Eco- Group – Uganda
10:30am- 11:00am	Plenary	Moderator	Managing Director –Development Revolvers Ltd
10:30am–10:50am	Renewable Energy enterprises Survival after COVID-19	John. K. Walugembe	Executive Director, Federation of Small and Medium-Sized Enterprises-Uganda
10:50am–11:10am	Accelerating LPG Uptake in Africa. The Kenyan perspective	Elizabeth Muchiri	Country Director The Global LPG Partnership – Kenya
11:10am– 11:30am	Cooperatives as agents of last mile distribution of Renewable energy solutions – The case of Ghana	Mohammed Aminu Lukumanu	C.E.O, Ghana Alliance for Clean Cooking (GHACCO)
11:30am – 11:50pm	Plenary	Kusiima Alfred	Managing Director –Development Revolvers Ltd
11:50am- 12:00pm	Way forward & Wrap up	Kusiima Alfred	Managing Director –Development Revolvers Ltd

## **c) PROFILES OF THE PANELISTS WE ENGAGED**

### **KIMBOWA RICHARD (UGANDA)**

Richard Holds an M.sc Dev. Mgmt. (Open University, UK) and B.Sc. Forestry (Makerere University, Uganda). He is the Programme Manager at Uganda Coalition for Sustainable Development (UCSD), after working with the CSO sector in Uganda / East Africa for more than 20 years. He is currently Chairman of the International Forum for Sustainable Energy (INFORSE - East Africa) and the Renewable Energy CSOs Network (RECSO) in Uganda

### **ELIZABETH MUCHIRI – BIO (NAIROBI – KENYA)**

Elizabeth Muchiri is currently the East Africa Director for the Global LPG Partnership (GLPGP). In her role, she liaises with stakeholders in the LPG sector to develop strategies that will accelerate adoption of clean cooking LPG amongst the low income earners.

Elizabeth has been in the gas business for almost three decades now, focusing specifically on LPG since 2000. She has worked with industrial, commercial and domestic sectors. Her experience spans multinational company, state owned enterprise, private companies, importers and distributors of bulk LPG, and consumers at household level.

Elizabeth believes that cooking should be a relaxed and enjoyable experience that allows families to spend more time together, save time and money, and improves the quality of life for all. She delights in raising awareness on energy efficiency and affordability. Currently, she is coordinating different research projects related to micro finance, HAP (household air pollution) and cooking pot efficiencies.

Elizabeth holds a Bachelor of Commerce (Management) from University of South Africa (UNISA) and an MBA in Strategic Management and Entrepreneurship (Strathmore University Business School).

### **DR. PATRICK BYAKAGABA (UGANDA)**

Dr. Patrick currently works at the Department of Environmental Management, Makerere University. Patrick does research in Theoretical Production Ecology, Environmental Governance and Forestry. He is currently working on political ecology of Shea butter tree in Uganda. He is skilled in Forestry mgt, environment, Natural resources mgt, Forestry ecology, Biodiversity, Climate change and sustainable development. His passion for clean energy has moved him places across the globe

### **MOHAMMED AMINU LUKUMANU (GHANA)**

Mohammed is a development economics expert by training and particularly Cooperatives. Currently he is serving as the CEO of Ghana Alliance for Clean Cookstoves and Fuels (GHACOO). He is a development practitioner with over 20 years of profession practice in the energy, WASH, agriculture and public sectors of the Ghanaian economy. He is currently leading a national advocacy campaign for universal adoption of clean cooking in Ghana. Over the years he has worked with cooperatives in energy which experience he will share with us.

### **JOHN KAKUNGULU WALUGEMBE (UGANDA)**

John is a Ugandan business executive, economist, author, entrepreneur and scientist. He is the founder of Oxford International Development Advisors Ltd (OXIDAL) and co-founder of the Oxford Green Partnership, Better Livelihoods Inc. He is a graduate of MBA from Harvard University. He has previously served as the Executive Director of the Uganda Small Scale Industries Association for five years. Before this, he served with the Uganda National Chamber of Commerce and Industry, as the Head of Business Development.

### **ROSE TWINE (UGANDA)**

Rose is a trained Nurse by training whose work of working as a student nurse in central London Hospitals and environmental departments? She also worked with London Borough Haringey (Haringey Council) in the United Kingdom. Her work with the environmental projects motivated her to embrace environmental conservation which made her take on a Uganda Country director job for a USA Organisation Potential Energy. Rose later went on to become a co – founder of Eco – Group (U) A Company she has run for over 10 years now and still going growing as producers of eco-stoves.

### **REV. MUGISA GAD – (UGANDAN BASED IN SOUTH KOREA)**

Rev. Gad is a priest with the Anglican Church of Uganda, Doctoral Student or PhD candidate at Asian centre for Theological studies and missions, Yangpyeong South Korea and currently serving as a missionary at sekwang Presbyterian Church Seoul as a pastor in English service. Gad worked with the campus crusade for Christ international as a mission for 7 years, St Francis chapel Makerere University - Uganda

### **KUSIIMA ALFRED (KUSIIMA ALFRED)**

Alfred is a rural finance expert by training particularly cooperatives, micro finance and community economic development. Alfred is also a student of Public Sector Innovation for sustainable development at KDI School of Public Policy and Management in Korea, He is a certified entrepreneurship trainer by sytra west Belgium, a certified financial literacy trainer by bank of Uganda and ILO respectively. He is very passionate about environmental conservation and Cooperatives as a vehicle for social economic transformation. He is the founder and managing director of Development Revolvers Ltd, a Ugandan registered business management Consultancy Company working in Uganda and beyond. The organiser and moderator of the Webinar meeting. Alfred served as the National Coordinator for the Uganda National Alliance on Clean Cooking in Uganda, Administrator/Document controller at the methane gas extraction project in Rwanda, USAID Land O lakes Dairy SME's and Cooperative Technical Advisor, Enterprise development consultant, Good neighbors Rwanda and Coordinator for the Church and community mobilization project under the Anglican Church of Rwanda provided business development services to small scale farmers and enterprise in Uganda to mention. He blends his experience with the cooperative model approach, that places the end user at the center in the ecosystem while supporting start-up renewable energy and agribusiness SME's as well as collectives.