



REPORT OF THE FRES UGANDA WORKSHOP ON UPSCALLING CLEAN ENERGY IN RURAL AREAS OF UGANDA

- Theme: Upscaling Usage of Clean and Affordable Energy in Rural Areas of Uganda
- Date: Tuesday 1st June 2021 | 8.00 am 2.00 pm
- Venue: Banquet Hall Golf Course Hotel, Kampala-Uganda

PRESENTED BY:

HUMPHREY ASIIMWE

THE EXCELLENCE CENTER

KAMPALA, UGANDA.

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1.0 INTRODUCTION:

FRES Uganda held the first ever Clean Energy Workshop at Golf Course hotel under the theme Upscaling Usage of Clean and Affordable Energy in Rural Areas of Uganda on Tuesday 1st June 2021 from 8.00am - 2.00pm in partnership with the European Union. The event was held as a hybrid event with participation both physical and virtual.

1.1 BACKGROUND:

Uganda's Renewable Energy Sector:

According to the Sustainable Energy for Action (SE4All) Agenda, access to modern and clean energy services is a necessary precondition for achieving the Sustainable Development Goals (SDGs). The benefits of increased access to modern and clean energy extend beyond just the energy sector but also contribute to addressing other social challenges such as poverty eradication, increased access to clean water, improvement of public health and access to education, women's empowerment and increased food production. Therefore, as a key driver of sustainable development, access to clean, renewable energy is crucial to realizing not only the SDGs but also the core promise of the 2030 agenda to leave no one behind. With 10 years left to achieve the SDGs, the 2020s have been called the decade of delivery. Yet at the current pace of electrification, half a billion people – primarily living in rural areas of sub-Saharan Africa and the Sahel – will still be unserved by 2030.

In Uganda, according to the draft Energy Policy (2019), biomass contributed 88% of the total primary energy consumed through firewood, charcoal and crop residues; electricity contributed approximately 2%; while fossil fuels (oil products) accounted for 10% of the national energy mix. In terms of electrification rates, Uganda has one of the lowest in Africa with a current access rate of 28%. This is largely attributed to high costs of electricity, the people's lack of capacity to pay and limited distribution of power lines. Therefore, the urgency of the challenge and the need to obtain long-term results that truly fulfil the promise of leaving no one behind means that all stakeholders must step up their efforts.

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About FRES and What we are doing:

Foundation Rural Energy Services (FRES) is a multinational non-profit company based in the Netherlands with subsidiaries in Mali, Burkina Faso, Uganda and Guinea-Bissau. The company aims to improve rural electrification by setting up small utility companies to provide solar electricity to rural Africa. Central to FRES' model is a fee-for-service approach which is premised on a belief in local entrepreneurship. FRES has therefore, has been electrifying rural communities by establishing commercial electricity companies under local management and gradually extended their reach from village to village, and district to district.

Even in some of the most challenging regions that other players often avoid, and are thus at the greatest risk of being left behind, FRES has remained active in these communities and has built a reputation as a trusted supplier of solar energy solutions to businesses, communities and household consumers.

The vision of FRES is to be the most reliable solar energy provider in the countries in which it operates by focusing on customer care, quality, and efficiency. As part of its growth and expansion strategy, FRES is embarking on upscaling its operations in Uganda. To realise the goal of upscaling its operations, FRES organized a regional workshop in Uganda to showcase some of its learnings from 10 years of operation in Uganda as well as connect with other stakeholders. The workshop was also meant to offer an opportunity for participants to share best practices and raise awareness on the changing roles, responsibilities and emerging trends in the industry as a driver for rural electrification.

2.0 OBJECTIVES OF THE WORKSHOP:

The workshop and related activities had the following objectives:

- a) To strengthen collaboration and communication with national policymakers and authorities in the renewable energy space;
- b) To increase cross-national learning in the areas of green energy and rural electrification taking from the achievements and lessons from players and consumers;
- c) To explore opportunities on creating a more enabling policy environment for private sector actors to meaningful contribute to rural electrification.

2.1 EXPECTED OUTCOMES OF THE WORKSHOP:

The following were the expected outcomes from the workshop:

- Develop feasible solutions to the challenges in Uganda's renewable energy sector
- Share updated information on the current environment enabling renewable energy uptake
- Create a platform for Renewable Energy actors and policy makers to network & collaborate

3.0 PLANNED SESSIONS:

- i. Discussions on Thematic Areas in the Renewable Energy space in Uganda including the enabling environment, policy changes, regulation, opportunities for expansion and funding.
- ii. Question and Answer Sessions with the experts, influencers and policy makers in the Renewable Energy Sector in Uganda.
- iii. Presentations and Discussion on Uganda's Rural Electrification Projections, Lessons and Recommendations highlighting the opportunities for FRES Uganda that lie therein.
- iv. Presentation on the FRES service model: lessons, success stories with testimonials on the achievements of FRES Uganda in 10 years of existence in Uganda.
- v. Exhibition on the Services of FRES Uganda

3.1 TIME TABLE

TIME	ΑCTIVITY
8.00AM – 8.50AM	Arrival, Registration, Exhibition and Breakfast
8.50AM – 9.00AM	Welcome Remarks by GM FRES Uganda
9.00AM – 9.15AM	Opening Remarks by the MANAGING DIRECTOR of FRES
	(Vision, Mission, Model and Performance in Uganda)

9.15AM – 9.25AM	Remarks by COMMISSIONER RENEWABLE ENERGY		
	Ministry of Energy and Mineral Development – Republic of Uganda		
9.25AM – 9.50AM	PRESENTATION ON FRES UGANDA:		
	(Lessons, Successes , Benefits and Bottlenecks)		
9.50AM – 10.00AM	TESTIMONIALS AND SUCCESS STORIES OF FRES UGANDA		
	(Achievements of FRES Uganda in 10 years)		
10.00AM – 10.30AM	PRESENTATION ON ENABLING ENVIRONMENT FOR RENEWABLE		
	ENERGY IN UGANDA		
10.30AM – 10.50AM	TEA BREAK		
10.50AM - 11.20AM	Q & A DISCUSSION ON ENABLING ENVIRONMENT		
11.20AM – 12.40PM	SHORT PRESENTATIONS AND DISCUSSION ON THEMATIC AREAS		
	INCLUDING:		
	RURAL ELECTRIFICATION PLANS AND PROJECTIONS IN		
	UGANDA		
	(By Representative from REA)		
	• TAX POLICY IN RENEWABLE ENERGY SECTOR IN UGANDA		
	(By Representative from Ministry of Finance Planning and		
	Economic Development)		
	• QUALITY AND STANDARDS IN THE RENEWABLE ENERGY		
	SECTOR		
	(By Representative from UNBS)		
	• PARTNERSHIPS AND FUNDING OPPORTUNTIES (By		
	Representative of GIZ)		
12.40PM – 12.50PM	SUMMARY OF DISCUSSIONS AND ACTION POINTS		

	By Rapporteur
12.50PM – 1.00PM	CLOSING REMARKS
	By Managing Director of FRES
1.00PM – 2.00PM	LUNCH, EXHIBITION AND DEPATURE AT WILL

4.0 WORKSHOP PARTICIPANTS

4.1 WHO WAS INVITED TO THIS WORKSHOP:

Approximately 30 delegates were expected to participate in the workshop both physically and virtually. These shall include renewable energy industry experts, policymakers, faculties in renewable energy, government/relevant ministry officials, electricity regulators, development partners, diplomatic missions, researchers in the energy sector, expert implementers of renewable energy policies, tax experts, bureau of standards officials, and other relevant actors and policy influencers/makers.

A zoom webinar was setup on 8th May under the registration link below: https://us02web.zoom.us/webinar/register/WN nVBf1DvxTNecqbRMs4rNQA.

The Webinar would send confirmation emails to all registered participants. This link was promoted on social media, email, website and among the relevant circles to gather participants. On the workshop day there were 83 registrants.

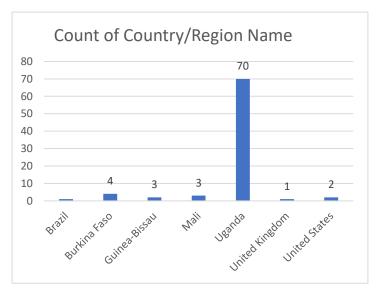
4.2 ONLINE ATTENDANCE REPORT

Report Generated:			Jun 05, 2021 6:53 AM					
Торіс	Webinar ID	Actual Start Time	Actual Duration (minutes)	# Registered	# Cancelled	Unique Viewers	Total Users	Maximum Concurrent Views (Online viewers at a given moment)
FRES W-SHOP	825 3109 7238	May 31, 2021 10:40 PM	343	83	0	42	150	28

A deeper look at the registration is below:

4.2.1 Participation by Country

Country/Region	
Name	Number of Registrants
Burkina Faso	4
Guinea-Bissau	3
Mali	3
Uganda	70
United Kingdom	1
United States	2



4.2.2 Registration by Company

Company	Number of Registrants			
FRES Uganda	40			
Guinea-Bissau	3			
Free solar Uganda	1			
CDC/WHO/UNICEF	1			
Aptech Africa	1			
ACCES BURKINA SARL	1			

ENVenture	1
FRES YEELEN BA	1
FRES YEELENBA-BURKINA	1
FRES-GB	1
Headford Machinery I	1
Integrated Mental Health Initiative - IMI	1
Itimpulsion	1
Mad Mali	1
Mbarara University of Science and Technology	1
Oduloch Uganda	1
PAOP	1
Power Trust Uganda Limited	1
Savika Uganda	1
SSD FRES MALI YEELEN KURA	1
Suxid Limited	1
Tinkah Uganda	1
Uganda Petroleum Institute Kigumba	1
Watzon Energy (EA) Ltd	1
World vision	1
YLEC-UGANDA	1
Zoreka solar Itd	1
No Specific Company	14

4.2.4 Online Participation:

One panelist Ms. Ninsima Claire Senior Tax Policy Expert from the Ministry of Finance, Planning and Economic Development participated remotely in the panel discussion.

4.2.5 Social Media Channels:

The following social media channels and website link were used to among others to promote the event.

Facebook: https://www.facebook.com/Fres-Uganda-Clean-Energy-Workshop 107377751516213

Twitter: https://twitter.com/FresUgEnergy

Website: <u>https://fres-uganda-clean-energy-workshop.business.site</u>. On Facebook an advert was setup which has the following results.

Summary				Last 60 day	rs 🔻
aac Sekiro spe	nt \$10.00 c	on 1 ad in the last (50 days.		
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	reported	in the timezone	74 1 1	Results	
Completed	nses		View	Results	
Completed	nses	in the timezone ural Areas of Uganda (View Date: Tuesd	Results	
Completed	nses		View Date: Tuesd	Results	

4.2.6 Online Recordings:

A recording of the event we shared in due course on YouTube however, a video recording of zoom and audio recording can be accessed from the account with the details below:

Website: https://us02web.zoom.us/

User Name: fresugandacleanenergyworkshop@gmail.com

Password: Link@fres20203

Session	Emerging Issues	Key Action Points and Recommendations (from presenters and participants)
1. Welcome Remarks	 The welcome remarks were given by General Manager FRES. He welcomed everyone and gave a snapshot of the history of FRES. 	
2. Remarks by the commissioner, Renewable Energy, Ministry of Energy and Mineral development- Republic of Uganda	 Ministry of Energy and Mineral Development (MEMD) was represented by Engineer David Birimumaaso, a Senior Energy Officer at the Ministry. He welcomed participants and gave a brief introduction to the Renewable Energy (RE) policy, a key framework that guides the use of solar and other forms of renewable energy in Uganda. The instrument also guides on other processes within the renewable energy sector including development of mini grids. The policy has some gaps that need to be addressed including the need to provide for use of emerging technologies in renewable energy production and distribution. Government of Uganda also has a framework for Public Private Partnerships which should be explored by actors in the RE energy sector including FRES. 	 Explore avenues for sustained engagement and cooperation among key stakeholders in the RE sector in Uganda for example MEMD, Solar Energy and RE Associations ad well as Development partners in the RE space. Explore opportunities for Private Partnerships with government of Uganda in Agrigulture, Industry and organisations that will need consistent, renewable energy.
3. Presentation on FRES UGANDA.	 The presentation, delivered by the Managing Director of FRES Uganda, focused on the last 11 	 The future for FRES is one going to be driven by

5.0. WORKSHOP SESSIONS EMERGING ISSUES AND RECOMMENDATIONS.

(Lessons, Successes, Benefits and Bottlenecks)	 years of FRES' operation's in Uganda which included a context to the fee for service model that FRES operates and some of the key client benefits. The presentation also covered some of the challenges and opportunities experienced by FRES during its operations. Some of the these included poor quality products on the market. This challenge however, created a demand for quality products. The foreseeable future of FRES includes plans focused on expansion and investments to enable diversification, automation, and expansion of Solar electricity services in Uganda. The presentation concluded with a video on the work of FRES Uganda. 	diversification, automation, and expansion of Solar electricity services in Uganda. There is need to explore how strengthened regulation and cooperation within the RE sector will contribute to the achievement of FRES' strategy
4. Testimonials and Success Stories of FRES Uganda	 In this session, some of the clients of FRES Uganda shared their experiences of using solar energy solutions provided by FRES Uganda. Robert Bayona from Mbarara switched to FRES Uganda after an engagement with staff from the company who showed him the benefits of using RE power from their grid. Having a solar system from FRES had encouraged his children to read and improve their literacy. That outcome inspired him to install solar energy for his business, which boosted sales due to reliable electricity supply for different services he made available such as phone battery charging. That success also inspired Robert to buy a third solar energy system to power projects on his farm in Mbarara. For another gentleman from a refugee settlement, FRES had provided energy that had 	 Important to note that all clients who gave testimonials went from using solar for household use to more productive use. How does FRES leverage the potential of renewable energy for both home and commercial use? Consider investing in providing solar systems that can power CCTV cameras, compound lights and other such lifestyle amenities that

	 improved his quality of life, affording him the opportunity to enjoy things like watching television. Importantly, he used the solar system from FRES to power a small shop ("duuka") business. Andersen Agaba from Isingiro felt frustrated by the limitations of other solar companies until he approached FRES Uganda. He experienced unlimited solar supply which he used to pump water in his home, something unimaginable with previous solar items he had tried. He recommended FRES Uganda should make more amenities available to power large energy capacity projects like instant water pumps, CCTV cameras. 	are not readily available for solar energy users. Also look into agricultural implements and mechanisation that uses Solar Energy already being piloted in Uganda.
5. A Quick Scan of the Enabling Environment of Uganda's Renewable Energy Sector	 This power point presentation by Mr. Eddie Oketcho, a Technical Adviser with GIZ was designed to trigger conversation on the potential of Uganda's Renewable Energy Sector. Presentation provided conversation starters for a proceeding panel discussion on opportunities and challenges in Uganda's RE sector. 	• How do we ensure actors in the RE sector like FRES are able to leverage opportunities in the technical and business aspects of providing affordable, clean energy?

6. Discussion Panel on thematic areas for upscaling clean energy in rural areas	 sector in Uganda, including regulation, standardisation and incentivisation to support investment in RE technologies. The five members of the panel and key highlights from the conversation are shared below: Richard Mwesigwa, Ag. CEO, Uganda Solar Energy Association (USEA) Esther Nyanzi, CEO, Uganda National Renewable energy and Energy Efficiency Alliance (UNREEEA) Eng. David Birimumaaso, Senior Energy Officer, Min. of Energy and Mineral Development Winnie Grace Onziru, Standards Officer, Uganda Bureau of Standards Clare Ninsiima, Ministry of Finance, Planning and Economic development Moderator: Elvis Ssekate Security and Risk 	 How do we ensure we are able to utilise power and leverage opportunities for willing of power across service providers? Importance of Rebuilding confidence in the use of RE particularly solar energy following earlier experiences consumers have had that accrue from a previously unregulated RE sector? USEA innovating around a call centre
	 Consultant Panellist Opening remarks Esther: UNREEEA is Committed to supporting different actors in the clean energy sector like FRES. David Birimumaaso: Min of Energy is committed to ensuring sustainable use of clean affordable energy Winnie UBOS: The Bureau is keen to ensure value for money in Uganda. UBOS works in 	

 partnership with other actors in the region to harmonise standards on goods and services in the market. Challenges in the standardisation sector include harmonisation of operating procedures for all renewable energy actors. Richard Mwesigwa: The association exists to foster growth and development of the solar industry in Uganda. The agency works with over 200 solar energy service providers countrywide and seeks to encourage self -regulation. 	
How does government of Uganda plan to upscale RE usage in line with NDP 3 outcomes on sustainable use of energy resources?	
Uganda currently uses 85% biomass energy which is unsustainable and must be reversed. To that end, Government of Uganda was committed to four outcomes in its renewable energy policy namely: - increasing electricity Increasing access to electricity Increasing access to clean energy Increasing access to clean energy technologies	
How has the Solar association of Uganda Positioned itself to support increased use of Solar energy in Uganda?	
 Rebuilding consumer confidence in the use of Renewable energy. The biggest challenge in the sector is wavering confidence in the use of solar systems due to bad experiences from using solar systems within an unregulated RE sector. There 	

Enfc Sect • •	are now opportunities for the use of solar to grow in Uganda. The association focuses on addressing barriers in the RE sector. The key challenges have been low quality products in the solar energy market which has affected trust and consumer confidence in solar systems. We encourage the public to look out for quality products in the market. As such the association would work closely with UNBS to ensure mechanisms of regulation are in place Establishing a Call Centre. The call centre innovation would encourage the public to interact with the association for mutual benefit. Solar users will have an opportunity to access information on good quality solar services, among others. Support Access to finance to bring RE technologies closer to the people which would include ensuring technology service providers can access the market and vice versa trcing Standards in the Solar Renewable Energy or UNBS exists to design, enforce, and regulate sectors through creating standards. Encourage all sector players in the RE sector to become members of bodies such as USEA. This would ease streamlining of standards to guide operations within the RE sector. UBOS uses two standards for the sector namely Requirement standard and Test Standards	 Encourage all sector player in the RE sector to become members of bodies such as USEA. This would ease streamlining within the RE sector.
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Gives the requirements for all solar products and	
-9-5 gives the guidance for the test method to ensure products meet the standard for the market.	
 The bureau also encourages accuracy and truth in advertising to mitigate against instances where products give false information on number of watts, voltage capacity, etc. 	
 For plug and play systems, lights are required to give at-least 90% of use after 2000 hours of use. 	
- Protection against water for all solar products	
 Thorough workmanship for all solar products including cables, connectors, switches, etc. 	
 Ensuring that information on all products is worded in a manner that clients can understand 	
 Consumer Protection. UBOS works to ensure to protect consumers 	
How is MOFPED incentivising the use of clean energy in Rural areas in Uganda.	
 Incentives to promote RE use include tax waivers on al Solar and RE products and accessories to support upscaling and deepening of renewable energy access. 	
UNREA	
UNREA	

 In 2017 UNREA profiled the experiences of companies in the RE sector. Some issues identified arose around negotiation, skills gap, fake/low quality products on the market, They have published a guide to inform actors in the sector 	
 More General Comments Leveraging net metering options to provide hybrid energy solutions. How to ensure investors and government can work together around ownership of assets like mini grids and distribution of Government leasing products to developers for up to 15 years. Sites for possible concessions can be accessed from the mini grid Master plan Financing options for the energy sector remain low. We need to raise awareness for different actors to know Explore options for financing RE projects including partnerships with the pension fund and the infrastructure fund We need one body to streamline regulation in the sector The need for partnerships with platforms to be supported 	 The need for initiatives to increase awareness on the use of renewable energy alternatives such as cooking stoves, The need for harmonised, streamlined regulation of the RE sector Participation of more stakeholders in the world energy day including academics and researchers. Leverage opportunities for Youth to innovate in the energy sector with the assurance of impact funding

7.0 GALLERY











7.0 MEDIA HIGHLIGHTS

GOV'T ASKED TO WAIVE TAXES ON SOLAR ENERGY ACCESSORIES



The government has in the recent past waived taxes on solar panels and batteries to develop the solar energy sector.

Henry Sekanjako Journalist @New Vision

The government has in the recent past waived taxes on scar panels and baderies to develop the solar energy sector.

However, according to the solar anargy dealers, the government needs to coopletely sto away with fases on solar energy products in Ugansia.

According to Joshin Muslime, the general Manager Free Upanda, a solar energy company, the government had initially waved off the barea on solar energy accessories and reinbackaed the lax in 2016.

The pinch for taxes is on accessories, the batteries and panel are exempted but offer accessories like wines and bubb are taxed if the government can at one point remove these lares. "Manime sold

She noted that with taxes removed on solar energy products. Upandena especially those in rurel areas, will have access to power for dominatic and commercial use



Fake Products

The dealers also asked the government to take action against people dealing in take solar energy products, which have flooded the meriest.

The fake products, according to Muslime, have affected the market for solar anergy in Uganda by splar energy users and prospective users.

Someone goes to the market boys for quality solar system and written a few deps the system is down, he goes back he buys a battery, so you find such a person mody feed up tired saying solar doesn't work.

Government should ensure that quality solar comes on the market, this quality will ensure value for money for the end covers," Missime and,

She reade the remarks on Thursday, during delebrations to mark 10 Years of Fres in Upanda. The solar energy company provides solar energy to runni communities if Upenda, on a fee for annual ended. Unlike other solar energy service provides, Fres solar energy, instellat, melotians, repeirs and replaces the recom-out parks of the system as long as the customer is unsag to solar system.

"We walk me powney with the customer, we avail the system and keep connership of the system, but we make the customer satisfied we do maktenance, repears , replacement be it one years, for years we are with you as long as you are paying the manify service fee. "Allo Verbagen, the managing devote Fire Ugende and.

The company correctly operates in 33 districts in Western, southwestern and central Uganda among other parts. of the ocustry

of the occurry. To weed cut take solar energy products on the market, Verlagen impleted the government to step up regulation of the sector and veden the scope of legislation which he sed is focused on certification. He also impletend the government to support the after-sele services buy actar energy providers to ensure that the solar users have unineted power supply.

'On our side, we have a specific model see see energy as a service, we don't sell products, we want to make sure people have energy today, tomorrow and in the future and that is why we take responsibility of our systems and maintenance, that gives us a unique system in the market." he said.

Youth employment

According to the soler energy providers, supporting the soler everyy sector is a government to addressing unemployment emorg the youth in Ugenda.

Musime, the managing director Free Uganda, said as a way of creeting employment, they have provided yobs to 12,000 people.

This is heating out 3,000 solar business opsicitanities and these employ. 12,000 people indirectly, the youth operating solars and other businesses that require power. Navane sold Jackson Russicaza, one of the banetokina's a solar to dama a king through the support of the company, which heatest han connect his water in flatteness religies addressed cargo, the set, 3 norm a sales on the cargo, and i use this prover to seek on my cleart's hair, it is available 24 hours."

Just like Russkeza, Franklin Annda, a poulity farmar said he has been able to take care of his linencial needs, by using the power, for his poulity business.

"It has helped we on light, broker birds eat day and right If you don't have reliable asker, you and up using e lemps which are costly." Annote seid

The challers in solar energy, asked the government to increase awareness campaigns to make solar readily acceptable to the communities and ensuring that the solar systems sold on the market are of quality

They also triged the government to consider implementing and exphasizing the quelity actar standard or solar products, which they and will be introduced this month.