



Roadmap for an Enabling Policy & Regulatory Environment to Scale Pay-As-You-Go Solar

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Developed by:

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IMPACT
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Foreword



The Uganda Rural Electrification Strategic Plan (2013-2021) was a key instrument in driving electrification rates in Uganda. The objective of this strategy was to position the electrification development program on a path that will progressively advance towards achievement of universal electrification by the year 2040, consistent with the existing policy of the Government, while ensuring the displacement of kerosene lighting in all rural Ugandan homes by 2030. This strategy recognized the importance of

both grid and off-grid solutions. As a result, off-grid solutions have grown in number, creating jobs and improving livelihoods. The Off-Grid Solar (OGS) sector is a key for increasing energy access, Pay-As-You-Go (PAYG) solar products provide the lowest cost entry point for energy access and are therefore suitable for rural areas with intermittent incomes. In 2021, the Uganda Bureau of Statistics (UBOS) reported that solar use went up from 18% in 2017 to 38% in 2020; this increase was largely attributed to the proliferation of OGS products and the popularity of PAYG.

Recognizing the role that OGS/PAYG can play, the Ministry of Energy and Mineral Development (MEMD), with support from the World Bank and in collaboration with Strategic Impact Advisors (SIA), embarked on a process for development of key strategic objectives, major steps, and key implementation activities on how the technology can be further scaled up to improve energy access. Over the past year, the project has identified the main challenges affecting the growth of OGS/PAYG and how they can be addressed. As a business model that provides electricity and access to finance leveraging mobile technology, PAYG is affected by policies and regulations in the electricity, finance, import, data protection, and telecommunication sectors. Existing frameworks have not been designed to take PAYG technologies and business models into account, because the evolution of technology and business models has outpaced regulation. The process has therefore been conducted with stakeholders across various sectors including finance, ICT, and trade. Together, we have agreed to address six major issues which will create an enhanced policy and regulatory environment for the solar market. This will accelerate growth by de-risking and attracting investment and scaling up responsible consumer financing.

The implementation of this roadmap in the next three years will scale up off-grid solar and consequently improve energy access rates in rural areas. This will contribute to achieving the Uganda government's target of universal access to electricity by 2030.

For God and My Country.

Hon. Dr. Ruth Nankabirwa Ssentamu

Minister

Ministry of Energy & Mineral Development

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Sincerely,

Pauline Irene Batebe
Permanent Secretary
Ministry of Energy & Mineral Development

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List of abbreviations & acronyms

Acronym	Description
BOU	Bank of Uganda
DFA	Digital Frontiers Association
DFS	Digital Financial Services
EASP	Energy Access Scale Up Project
FITSPA	Financial Technologies Service Providers Association
MEMD	Ministry of Energy and Mineral Development
MIA	Ministry of Internal Affairs
MoFPED	Ministry of Finance Planning and Economic Development
NIRA	National Information Registration Authority
NITA	National Information Technology Authority
NREP	National Renewable Energy Platform
OGS	Off Grid Solar
PAYG	Pay-As-You-Go
RCDF	Rural Communications Development Fund
SIMPRS	Security Interest in Movable Property Registry System
Towerco	Telecommunication tower companies and operators
UBA	Uganda Bankers Association
UBOS	Uganda Bureau of Statistics
UCC	Uganda Communications Commission
UCUSAF	Uganda Communications Universal Service Access Fund
UDAP	Uganda Digital Acceleration Project
UECCC	Uganda Energy Credit Capitalization Company
UMRA	Uganda Microfinance Regulatory Authority
UNBS	Uganda National Bureau of Standards
URA	Uganda Revenue Authority
URSB	Uganda Registration Services Bureau
USEA	Uganda Solar Energy Association

Executive Summary

Uganda has a vibrant and competitive off-grid solar (OGS) market, with companies that offer a wide range of solar products on pay-as-you-go (PAYG) financing. PAYG-enabled products provide a low-cost entry point for energy access and contribute to national electrification, economic growth, and digital development goals. According to GOGLA, more than two million solar products were sold in Uganda since 2014, with half sold with PAYG financing. **In 2020 alone, despite the COVID-19 pandemic and strict lockdowns, PAYG sales accounted for over 140,000 of the OGS products sold.** Solar sales significantly improved energy access in Uganda, which grew from 18% in 2017 to 38% in 2020 (UBOS, 2020). However, critical gaps remain.

PAYG is affected by policies and regulations that apply to the electricity, finance, and information and communication technology (ICT) sectors. Existing frameworks are not designed to take PAYG technologies and business models into account because the evolution of technology and business models straddle several sectors and have existed outside of direct regulation. The limited government awareness of and support for PAYG means there is a risk of new policy or regulation, or new interpretation of existing policies or regulations, that negatively affect the PAYG market. An enhanced policy/regulatory environment for the PAYG sector could accelerate growth by de-risking and attracting investment and scaling up responsible consumer financing. In Uganda specifically, OGS PAYG adoption is particularly affected by policies and regulations coming from the ICT and finance sectors. In 2022, Strategic Impact Advisors (SIA) tested tools from the draft OGS PAYG policy toolkit it developed for the World Bank in Uganda through a series of stakeholder engagements championed by the Ministry of Energy and Mineral Development (MEMD). The series of workshops with policymakers led to MEMD, identifying key policy issues and potential policy options to support an enabling environment for PAYG to scale.

With technical assistance from SIA, MEMD identified six issues across both ICT and finance segments. For each issue, specific policy or regulatory interventions were proposed and validated by the policymakers involved in their implementation. These ideas form the basis of this roadmap of policy recommendations that includes the specific steps, feasibility, timeline, and impact of each policy recommendation.

1.0 Background: OGS/PAYG in Uganda

PAYG is affected by policies and regulations in the energy, finance, and telecommunication sectors. Key challenges to scaling PAYG in Uganda include high transaction costs, poor credit repayment rates, and poor quality products, among other issues detailed in this roadmap. The existing regulatory frameworks, although broadly supportive of the off-grid solar sector, are not designed to take PAYG technologies and business models into account. The cross-cutting sectoral nature of PAYG, combined with limited awareness of PAYG in sectors outside of energy, creates risk of a new policy or regulation, or a new interpretation of existing policies or regulations, that could negatively affect the OGS market. An enhanced policy environment for the PAYG market could accelerate growth by de-risking the sector and attracting investment while enabling responsible consumer financing.

2.0 The enabling environment for OGS and PAYG in Uganda

Uganda's OGS PAYG industry is well developed compared to other markets in the East Africa region such as Ethiopia. There are over 250 registered OGS companies in Uganda, with the majority offering consumer financing.¹ Companies adopting the PAYG model rely on Uganda's developed mobile money ecosystem to collect payments from their customers. PAYG companies are required to register with digital financial services (DFS) providers, aggregators, or mobile network operators (MNOs) who in turn are regulated by the Bank of Uganda (BOU) or the Uganda Communications Commission (UCC). Customers wishing to acquire a solar product via PAYG must present a valid national ID and a registered mobile money account with one of the two major MNOs. The cost of using mobile payments directly impacts the costs embedded in PAYG products. Taxation on mobile payments applies only to mobile money withdrawals. Currently, PAYG mobile transaction payments are not affected by taxation. However, several OGS products are subject to VAT, import duty, and other levies. Only solar panels are completely exempt from taxes.

The key financial regulatory stakeholders with jurisdiction over issues that affect PAYG are BOU, Ministry of Finance, Planning and Economic Development (MoFPED), and the Uganda Revenue Authority (URA). In September 2022, BOU issued the financial institutions (Credit Reference Bureau) regulations, which established minimum standards for credit reporting. New to the minimum requirements for such reports is the mandatory use of the National Identification Number (NIN) or alien identification number as the primary identifiers. These regulations were issued pursuant to the requirements of section 66 of the Registration of Persons Act, 2015 which mandates use of NINs or Alien Identification Numbers in granting access to financial services. Therefore, effective 2023, individual borrowers must have a NIN to use financial services and products offered by regulated financial institutions. As of September 2022, the NIRA had registered 25.9 million Ugandans and plans to enroll all Ugandans to the new ID by 2025.² Despite mass enrollment, many Ugandans who are registered fail to pick up their physical

¹ <https://www.useaug.org/our-members/>

² <https://www.nira.go.ug/media/2022/11/FAQs-on-Mass-Enrolment-Renewal.pdf>

national ID cards and therefore do not know their NIN. The NIN is a requirement to acquire a SIM card and associated digital services including OGS/PAYG products. The lack of a NIN deters the use of several public and private services.

Within the energy sector, regulations affecting OGS/PAYG are issued by MEMD and the Electricity Regulatory Authority (ERA) with support from the Uganda National Bureau of Standards (UNBS). For example, MEMD instituted guidelines for the standardization of solar plug-and-play products in collaboration with UNBS, while ERA issues and regulates installation guidelines for larger solar home systems (SHS). MEMD and ERA have minimal influence on the financial regulation affecting PAYG, which is driven by financial and ICT regulators such as the BOU and MoFPED.

Payments are an integral part of commercial and financial transactions in Uganda, especially for the PAYG sector. Uganda has several laws and policies governing digital payments and ICT. There are certain laws in place which are relevant to the regulation of payment systems and these include:

- The Bank of Uganda Act (Cap 51) which provides for the establishment of the central bank of Uganda
- The Financial Institutions Act (2004)
- The Electronic Transactions Act (2011) which governs the use, security, facilitation, and regulation of electronic communications and transactions
- The Contracts Act (2010)
- The Electronic Signatures Act (2011) and the Anti-Money Laundering Act (2013)

These laws do offer guidelines, however, they are not comprehensive in terms of regulating payment systems across the board. Broadly, the National Payment System (NPS) helps to bridge this gap by providing for the safety and efficiency of payment systems, the regulation of payment systems, payment service providers, and the issuance of electronic money, among others.

3.0 Applying a policy toolkit with Ugandan policymakers to create a roadmap for an enabling environment to scale OGS and PAYG use

In 2022, policymakers in Uganda applied and tested tools from the draft OGS policy and regulatory toolkit developed by the World Bank with support from SIA. The toolkit is designed for government policymakers, development agencies, and development practitioners interested in identifying policy approaches to support the scale of OGS solutions including PAYG. Energy policymakers can use the toolkit to identify policy issues and options for enabling OGS and PAYG use, including issues that may traditionally not fall under the mandate of energy ministries. Policymakers for other sectors, including finance and ICT, can use this toolkit to understand how OGS and PAYG can support participation in the digital economy and complement investment in digital infrastructure, while also helping to close the financial inclusion gap.

MEMD used the toolkit to facilitate inter-ministerial dialogue with a goal of creating a coordinated policy environment that supports consumers’ purchase of OGS products to meet their electrification needs. While the toolkit does not suggest a particular policy outcome or endorse a regulatory approach, MEMD applied its analytical tools to create this roadmap with other stakeholders on how to act on the priority issues inhibiting the scale and use of PAYG.

4.0 How the OGS/PAYG toolkit was applied to develop a roadmap

The toolkit provides 16 tools that policymakers can apply to address issues constraining the scale of OGS and PAYG financing. Led by MEMD, stakeholders in Uganda used the tools in a series of interviews and workshops to identify and analyze barriers to OGS/PAYG. Table 1 below identifies the different stages of toolkit testing, including the tool tested and the result of the testing.

Table 1: List of tools used at different stages of toolkit testing

Stage 1: Country Level Policy Diagnostic and Stakeholder Identification	
Tool 3: Stakeholder Map	This tool was used to identify key stakeholders of influence, levels of knowledge, understanding of policy issues, capacities, skills, and potential concerns. The map listed all stakeholders along with their contacts, areas of knowledge in relation to OGS/PAYG, and the role they play.
Tool 4: Stakeholder Influence and Interest Grid	This tool was used to map out the most influential and interested stakeholders in Uganda. The stakeholder with the highest influence and interest was selected as the Champion. In Uganda, the Champion was the Ministry of Energy and Mineral Development (MEMD).
Tool 2: Priority Mapping	This tool ranked stakeholders based on their various levels of decision-making authority, influence, and input.
Stage 2: Inception Workshop	
Tool 1: Policy Diagnostic (using the 3 As)	This tool was used to help stakeholders to identify issues across the PAYGO/OGS enabling environment and classify them into components of the 3 As (availability, accessibility, and accountability).
Tool 11: Policy Options Worksheet	This tool was used to help stakeholders find the best solutions/courses of action to take on issues arising across the OGS/PAYG enabling environment.
Tool 5: Stakeholder Concerns	This tool was used to identify each stakeholder’s concern on the identified issue and rank the level of their concern and how urgent it is to address the concern in relation to the others.
Stage 3: Finance and ICT Dialogues	
Tool 12: Policy Cost/ Effectiveness Evaluation	This tool was used to rank the effectiveness and the cost of different recommendation options. Each meeting participant was given the opportunity to rank the course of action/recommendation.

Tool 13: Risk Analysis This tool was used to identify and weigh the magnitude of risks of pursuing a particular recommendation since all policy options will come with risks and trade-offs.

Stage 4: Validation

Individual Validation The team will engage in individual dialogue with each of the key stakeholders to ensure that steps and actions required of them are feasible and that funding is available to address them. The key stakeholder may propose additional steps to align with their internal structures/activities.

Final Workshop The team will engage in a multi-stakeholder workshop to ensure that the document represents industry interests.

5.0 Roadmap structure

The roadmap is structured as follows.

Table 2: Roadmap structure by role

Role	Institution	Detail
Champion	MEMD	Roadmap owner, in charge of steering owners and stakeholders and mobilize funds.
Steps /Issues	There are 6 issues, and each is to be addressed in several steps	Each step within an issue will have an owner.
Owners	NITA, UCC, UMRA, BOU, UECCC, MEMD, NREP	Each step has an owner who will take responsibility to address and fund the step.
Key stakeholders	MoICT, BOU, URSB, UBA, USEA, UNREEEA, URA, MoFPED, NIRA, others.	These play a significant role in addressing the issues, e.g., part of a working group or actors in a specific.
Timeline/Funding	Activities are expected to be funded by process owner & MEMD	All issues are to be addressed within 1-3 years.

6.0 Roadmap development process

The roadmap was developed over a 1.5 year consultative process. However, this process can vary anywhere from 1-2 years depending on external factors/contingencies of the champion, key stakeholders, and the industry.



7.0 OGS/PAYG issues & recommendations

The toolkit identifies 12 key areas that affect PAYGO/OGS. Recommendations and policy actions to address the issuers were proposed through the testing process. These issues were then classified under the consumer the 3 As (affordability, availability, accountability) consumer centric diagnostic framework used in the toolkit, described in detail below:

- **Availability:** a market state in which consumers can conveniently purchase OGS products, including PAYG products with consumer financing, from competitive OGS providers.
- **Affordability:** a market state in which consumers can afford to purchase OGS products either with cash or financing at a price that is suitable for their income levels.
- **Accountability:** a market state in which OGS companies are responsible for providing consumers with quality products, clearly communicating their products' features, performance, and financing terms.

Through the stakeholder engagements and toolkit testing process, stakeholders identified the six priority issues that are the subject of this roadmap with specified actions to address those issues. The six issues are summarized in Table 3 and then presented along with a roadmap of action steps/recommendations validated with stakeholders in one discussion on issues on which they are identified as owners.

Table 3: Summary of issues affecting PAYGO/OGS and recommendations to address them

No.	Market condition	Category	Issue description	Recommendations
1. 1. ICT Issues				
1.1	Availability	ICT	Limited mobile network coverage in rural areas restricts OGS/PAYG energy access and limits digital and financial inclusion.	<ul style="list-style-type: none"> • Utilize UCC's Uganda Communications Universal Service Access Fund (UCUSAF) and NITA's Uganda Digital Acceleration Project (UDAP) funding to increase mobile network access in rural areas with limited energy access to support OGS/PAYG offerings.
1.2	Availability	ICT	National IDs are required to register a SIM card for mobile phones. It is challenging for rural residents to obtain a national ID, which is a	<ul style="list-style-type: none"> • Encourage service providers to accept the use of a digital NIN in place of the physical ID when purchasing OGS/PAYG products. • Support OGS/PAYG providers to collaborate with

			requirement to open a mobile money account.	stakeholders such as NITA to connect to the UG Hub or other platforms to help ease the process of accurate verification of the NIN.
1.3.	Affordability	ICT	Digital transaction costs comprise nearly 7% of the total cost of the OGS product, which increases the overall consumer cost.	<ul style="list-style-type: none"> Evaluate and institute measures to lower the cost of digital transactions for OGS/PAYG.

2. Finance Issues

2.1	Availability	Finance/ ICT	<p>OGS/PAYG providers' inability to access data to assess customers' creditworthiness prior to lending increases default risk and product pricing.</p> <p>OGS/PAYG providers make limited use of collateral (outside the PAYG system) to secure financing making it difficult to offer OGS/PAYG for productive use products and energy access above Tier 1.</p>	<ul style="list-style-type: none"> Build capacity of OGS/PAYG providers to use credit reference bureaus for credit scoring. Create awareness among OGS/PAYG providers of the Security Interest in Movable Property Registry System (SIMPRS) that allows entities to register security interest in movable assets as collateral.
2.2	Affordability	Finance	Inconsistent application of taxation on OGS products increases product cost to consumers.	<ul style="list-style-type: none"> MEMD to engage MoFPED and agree on a clear framework for administering solar products, MoFPED to share the instructions to URA on the areas that require clarification. Build capacity among the URA staff and OGS providers to consistently apply and enforce taxation using the USEA OGS taxation handbook.

2.3	Affordability	Finance	High cost of capital means that OGS/PAYG providers pass on the costs of their financing to consumers, which increases product costs for the consumer.	<ul style="list-style-type: none"> Establish a working group between UBA, UECCC, BOU, and other relevant stakeholders to enable learning/sharing on how to best implement the UECCC solar working capital facility. The aim will be to draw lessons from experiences of BOU and UBA and share best practices on how to effectively administer working capital facilities (whether in-house or through commercial financial institutions).
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8.0 Issue 1: ICT issues

Issue 1.1: Limited and unreliable access to mobile network coverage in rural areas

Consumers and OGS providers need reliable access to quality digital networks to 1) use OGS products that integrate digital technologies, 2) process PAYG payments with mobile money, and 3) communicate about after-sales service and payment issues.^{3,4,5}

OGS companies provide the necessary energy solutions that support the use of these digitally-enabled services. Recognizing digital transformation as a growing imperative to economic growth and to building resilience, governments are developing digital transformation strategies and taking an active role in promoting broadband investment, network expansion, and digital inclusion. Examples of digital transformation initiatives include the NITA-U's UDAP and the UCC's UCUSAF (Formerly RCDF). However, many rural areas have been left behind due to low profitability for service providers, and deliberate effort must be made to reach them.

³ Some OGS companies are **embedding low-cost GSM/GPRS modules and machine-to-machine (M2M) chips** to remotely monitor solar devices **via the ICT** network.

⁴ PAYG providers integrate digital payments and remote monitoring into PAYG products to drive efficiencies in payment collection and processing that contribute to lower product pricing.

⁵ In PAYG products, broadband networks are used to transfer proxy information and data between the consumer device and the OGS company.

RECOMMENDATION: MEMD to work with UCC's UCUSAF and NITA's UDAP to increase mobile network coverage in areas



2 year timeline



Stakeholders:
NITA, UCC, MEMD,
MNOs, Towercos, USEA



Market conditions
addressed:
Affordability



Medium
feasibility,
light touch

Impact on PAYG/OGS: Increased mobile network coverage in rural areas with limited energy access, making DFS more available to support OGS/PAYG activities

Step 1:	Establish a collaboration mechanism between MEMD, UCC, and NITA-U with clear terms of reference. The collaboration may be in the form of a memorandum of understanding or formal engagement with the goal of incorporating the role of OGS/PAYG in digital transformation and vice versa. The mechanism and its TORs should state the source of funding or resources to be put towards the activities e.g., from UCUSAF, UDAP, or EASP.
Owner:	MEMD
Funding Source	MEMD: EASP UCC: UCUSAF NITA: UDAP
Stakeholders:	UCC, MEMD, NITA, USEA MNOs, Towercos

MEMD, in collaboration with UCC's UCUSAF and NITA's Uganda Digital Acceleration Program (UDAP), hosts a dialogue to gather input from the private and public sectors on areas in need of improvement in mobile network coverage to support the availability of OGS/PAYG offerings. The UCUSAF, formerly known as the RCDF, is a semi-autonomous universal service fund managed and administered by the UCC. UCUSAF is mandated to extend communication services to the unserved and underserved areas of Uganda. The fund focuses on infrastructure availability, ICT awareness, accessibility, broadband connectivity and access, content, and research as well as advocacy. UDAP is a government project funded by the World Bank and implemented by NITA with the objective to (a) expand access to high-speed internet in selected areas, (b) improve efficiency of digital service delivery in selected public sectors, and (c) strengthen the digital inclusion of selected host communities and refugees.

Step 2:	Establish a private/public sector OGS/PAYG working group.
Owner:	MEMD
Funding source	EASP
Stakeholders:	UCC, MoICT, NITA-U, MEMD, MNOs, ICTAU, USEA, MEMD, Towercos

According to the NDPIII, the government of Uganda has set the target to increase national electrification rate to 100% by 2030. MEMD holds the mandate to increase the national electrification rate. MEMD oversees policy formulation and national electrification goals. MEMD is patron to energy industry associations such as USEA/UNREEEA and others. In this role, MEMD would convene a working group of relevant stakeholders to identify and develop solutions to invest funds in areas of limited OGS/PAYG and mobile network coverage.

Step 3:	Collect data on mobile network coverage gaps and share within the OGS/PAYG working group.
Owner:	UCC
Funding Source	UCUSAF
Stakeholders:	UCC, MoICT, NITA-U, MEMD, MNOs, USEA, MEMD, Towercos

UCC works with MNOs and Towercos to collect data about underserved areas. MEMD uses the collected data to facilitate dialogue from both private and public sector on areas in need of improvements in mobile network coverage to support the availability of OGS/PAYG offerings. MEMD shares the results of the dialogue to UCC.

Step 4:	Evaluate data from the dialogues and explore how UCUSAF and UDAP could be applied to support MNOs'/Towerco network expansion in underserved areas identified in the MEMD working group.
Owner:	UCC, NITA
Funding source	UCUSAF, UDAP
Stakeholders:	UCC, MoICT, NITA-U, MEMD, MNOs, ICTAU, USEA, MEMD

UCC and NITA evaluate data collected with the working group and establish areas for allocation of UDAP funding to MNOs/Towercos for mobile network expansion.

Step 5:	Publish findings and recommendations on utilization of the UCUSAF, UDAP 's universal access fund for OGS/PAYG growth.
Owner:	MEMD/UCC/NITA
Funding source	EASP/UCUSAF/UDAP
Stakeholders:	UCC, MoICT, NITAU, ICTAU, USEA, MEMD

The UCC, NITA, and MEMD publish findings on how the allocation of UCUSAF, UDAP funding improved mobile network coverage and energy access trends in the previously underserved areas.

Step 6:	Transition ownership of PAYG working group from MEMD to NREP.
Owner:	NREP
Funding Source	NREP
Stakeholders:	UCC, NREP, MEMD, USEA, NITA, MNOs, TowerCos

The working group moves from a fully-fledged government sponsored working group to one facilitated by the NREP. This working group continues to facilitate and promote inter-ministerial and industry communication by holding regular engagements to deliberate on collective initiatives and share policy developments that address mobile network infrastructure (i.e., voice, broadband), and digital capacity of consumers in the context of OGS and renewable energy.

Issue 1.2 Limited use of the national ID number (NIN) hampers access to digital financial services and OGS/PAYG in rural areas

The acquisition and verification of a national ID is a costly and protracted process for most citizens. The process needs to be digitized to allow those in remote areas to acquire their NIN. In collaboration with NIRA and UBA, the BOI has taken the initiative to ease the process of customer verification and authentication against records maintained by NIRA. This implies that a customer who provides a NIN (even without a physical card) can access financial services from supervised financial institutions.⁶ With the support of key stakeholders, the same model can be applied to verifying identity of customers to qualify for finance offerings and mobile money accounts used by OGS/PAYG providers. For example, the NITA-U has set up a hub where any service provider wishing to access government databases can connect and verify details such as NIN.⁷ However, it is not clear that OGS/PAYG companies know how to access the hub to accept a digital NIN as the key identifier.

⁶ Tier 4 Microfinance Institutions and Money Lenders Act 2016, mandates UMRA to regulate non-deposit taking financial institutions including asset financing companies like OGS PAYG.

⁷ <https://www.nita.go.ug/ughub>

RECOMMENDATION: Encourage the use of a digital NIN for the acquisition of PAYG/OGS products



3 year timeline



Stakeholders:
NITA, UCC, MEMD,
MNOs, MoICT, BoU,
NIRA, UMRA, FITSPA



Market conditions
addressed:
Availability



Medium
feasibility, light
touch

Impact on PAYG/OGS: Increased use of digital NIN and ease of customer's KYC validation and verification process reduces turnaround period for acquisition of OGS/PAYG product

Step 1:	MEMD establishes a working group with the goal of normalizing the use of a non-physical national ID (only a NIN is required) to access OGS/PAYG services.
Owner:	MEMD
Funding Source	MEMD EASP
Stakeholders:	MEMD, BOU, NIRA, UCC, NITA, USEA, UMRA, DFA, FITSPA

MEMD hosts a dialogue to gather input from both private and public sector on NIN digitization to support the availability of OGS/PAYG offerings. Stakeholders share views on what it takes to move from physical ID to digitization, what collaboration looks like, timelines and actions, and costs for each of the stakeholders. How to leverage existing platforms to facilitate authentication and validation of the NIN e.g., BOU/NIRA collaboration and NITA UG hub.

Step 2:	Undertake rapid assessment on requirements for OGS/PAYG providers to digitize customer's NIN for the acquisition of a product.
Owner:	NREP
Funding source	MEMD
Stakeholders:	MEMD, USEA, UMRA, MNOs, UCC, MoICT, NITA, NIRA, BOU

In collaboration with USEA and OGS providers, NREP will map the current process for acquiring a product in rural communities and type of NIN requested (i.e., physical or digital) and then assess additional resources required to fully digitize the process (e.g., who are the other actors - NITA, UCC, MNOs, NIRA? What resources do OGS companies need to put in place to digitally verify NIN? Can NITA support the activity through the UG Hub?)

Step 3:	Pilot the use of digital NIN with some OGS/PAYG providers for at least 6 months and convene stakeholders to share findings from the assessment and the pilot; discuss possible solutions to normalize the use of a digital NIN in the acquisition of DFS.
Owner:	NREP
Funding source	MEMD
Stakeholders:	MEMD, USEA, MNOs, UCC, NIRA, BOU, MoICT, UCC, NITABOU, UMRA





The pilot will help to compare the uptake of OGS PAYG products with a digital NIN and compare it to the use of a physical NIN. The learnings from the pilot, together with the experiences of BOU/NIRA collaboration, will be shared in the working group. These learnings will then be used to inform the future enforcement of the use of a digital NIN in the acquisition of DFS services.

Step 4:	Conduct progress assessments and inform stakeholders.
Owner:	MEMD
Funding source	MEMD
Stakeholders:	MEMD, NIRA, BOU, MNOs, UMRA, USEA, NITA, UCC

MEMD will monitor OGS/PAYG sales trends following the use of the digital NIN and share findings within the working group. MEMD together with NREP will publish learnings from the working group which can then support UMRA/BOU/NIRA in further encouraging other service providers in the use of the digital NIN.

Issue 1.3: High digital transaction costs on OGS/PAYGO

RECOMMENDATION: Evaluate and institute measures to lower the cost of OGS/PAYG digital transaction costs

			
3 year timeline	Stakeholders: NITA, UCC, MEMD, MNOs, MoICT, BoU, NIRA, UMRA, FITSPA, URA, MoFPED, USEA	Market conditions addressed: Affordability	Low feasibility, prescriptive touch

Impact on PAYG/OGS: Reduced cost of digital transactions on PAYG payments collection and processing contribute to lower product pricing thus potentially increase product uptake

Step 1:	Conduct a study on how digital transaction costs influence OGS/PAYG pricing.
Owner:	MEMD
Funding Source	MEMD
Stakeholders:	BOU, MEMD, UCC, NITA, UMRA, MoFPED, URA, MoICT, USEA, DFA, FITSPA, USEA, FSDU

MEMD will conduct an in-depth study to evaluate unit costs of digital transactions for OGS/PAYG companies and the cost to consumers. The study will evaluate the fiscal impact of current OGS/PAYG digital transaction pricing, if any, and evaluate the cost/benefits of changes to the transaction costs to the government and likely influence consumers' economic behavior and the 3As. The study will also investigate indirect costs such as integration, USSD costs, and company overheads. The study would be conducted in close collaboration with USEA and BOU as they regulate the OGS/PAYG providers and ICT service providers who are key in setting digital transaction rates.

Step 2:	Engage in industry and policymaker dialogue to explore challenges and interventions to reduce digital transaction costs for OGS/PAYG products.
Owner:	MEMD
Funding Source	MEMD
Stakeholders:	BOU, MEMD, MoFPED, URA, USEA, DFA, FITSPA, UCC, MNOs, NITA, UMRA

Following the study, MEMD will explore challenges and options for reducing the digital transaction cost of OGS/PAYG products through a series of dialogues, considering the following

questions: What are the key cost drivers and how can they be lowered? Is it possible to zero rate some digital services? What services can be zero rated, and how? How much will it cost the government, and is there a budget option for subsidies? Who can benefit from zero rated services? How can the government ensure mobile money rates are fair for all? Are there existing shared solutions that OGS/PAYG providers to lower their costs?

Step 3:	Create an action plan and testing of approaches to mitigate costs of digital transactions in OGS /PAYG products.
Owner:	MEMD
Funding Source	MEMD
Stakeholders:	BOU, MEMD, MoFPED, UCC, MNOs, DFA, FITSPA, USEA

Following several dialogue with stakeholders, MEMD and other stakeholders will create an action plan to mitigate the costs of digital transactions to consumers.

Step 4:	The action plan is implemented by various actors and MEMD follows up on results through regular meetings.
Owner:	MEMD
Funding Source	MEMD: fund monitoring activities Other stakeholders: funded through own sources
Stakeholders:	NITA, BOU, MEMD, MoFPED, MNOs, UCC, NREP

Following the creation of an action plan, various stakeholders would act accordingly. E.g., NITA would sensitize and plug PAYG companies onto a shared integrated platform (UG Hub) that would lower cost of USSD, GSM, and integrate with MNOs. The UG Hub enables data sharing on a platform across all players to lower costs. To date, there are over 400,000 transactions daily and 21 participating banks; 160 private sector players have expressed interest to join, and PAYG companies could benefit from this. The action plan will be implemented over a period agreed upon by the stakeholders. MEMD will assess the impact of the actions on the scale up of OGS/PAYG over the period and publish the results.


9.0 Issue 2: Finance regulation

Issue 2.1: Limited customer data for credit scoring


Assessing credit worthiness is critical in offering OGS/PAYG products. Most OGS companies have established their own customer databases, which are used to assess a customer's ability to pay. However, high default rates and a lack of reference data is still a challenge among OGS/PAYG companies. A shared CRB for Tier 4 providers can address some of these issues.

The BOU and UMRA have licensed a CRB which will enable small lenders to assess customers prior to issuing loans or products. Furthermore, the URSB has instituted SIMPRS, a system that can be used to register collateral. However, awareness and other factors to use the CRB or SIMPRS remain low.


RECOMMENDATION: Build capacity of OGS/PAYG providers to use credit reference bureaus for credit scoring and create awareness of the SIMPRS




2 year timeline



Stakeholders:
UMRA, BOU, MEMD,
USEA



Market conditions
addressed:
Availability



High feasibility,
prescriptive
touch

Impact on PAYG/OGS: PAYG provider's ability to improve risk assessment of the OGS customer prior to lending is improved with access to customer credit data, and this also lowers consumer costs

Step 1:	Hold UMRA/BOU/URSB hosted workshops to build OGS/PAYG providers capacity to use CRB.
Owner:	UMRA
Funding Source	UMRA
Stakeholders:	UMRA, BOU, MEMD, CRBs, USEA, NREP, URSB, PAYG Providers

UMRA will build OGS/PAYG provider capacity to participate in CRBs and SIMPRIS as users and contributors and standardize the form of data submissions.

Step 2:	Track OGS/ PAYG provider participation in CRBs and SIMPRIS.
Owner:	UMRA
Funding owner	UMRA
Stakeholders:	UMRA, BOU, MEMD, USEA, PAYG Providers, CRBs, URSB

UMRA will track and share information and publish a report on participation by PAYG providers in CRBs, SIMPRIS and how it contributes to OGS/PAY product uptake and default rates.

Issue 2.2 Inconsistency in application of taxation regime for OGS products

Inconsistent application of the tax laws remains a hindrance to the growth of the solar sector and to energy access. In the past, efforts led by USEA and MEMD helped to improve taxation for OGS products. Whereas taxation laws that allow for exemption of some OGS are in place, some areas remain ambiguous and are subject to interpretation. The USEA solar taxation handbook and subsequently the East Africa version are some of the initiatives made by industry to remove the ambiguity in taxation. However, issues of ambiguity and inconsistency remain rife.

RECOMMENDATION: Build capacity of taxation regulation among stakeholders and support the consistent enforcement of taxation for OGS products

			
3 year timeline	Stakeholders: MEMD, MoFPED, USEA, NREP	Market conditions addressed: Affordability	Low feasibility, prescriptive touch

Impact on PAYG/OGS: With reduced uncertainty on taxation and cost of importing OGS, PAYG companies are able to lower their costs of financing, this can translate into lower product pricing for consumers.

Step 1:	MEMD to engage MoFPED to clarify areas of inconsistencies in taxation of OGS products.
Owner:	MEMD
Funding source	MEMD
Stakeholders:	URA, MEMD, USEA, MoFPED, NREP

MEMD will hold dialogue with stakeholders on challenges in consistent treatment of taxation of OGS products and use of the USEA taxation handbook. MEMD and MoFPED will sign a MoU committing to consistent application of taxation as agreed in the dialogue. Stakeholders will then agree on ongoing capacity building and monitoring of proper and consistent tax treatment and status meetings with MEMD, MoFPED, NREP, URA, and USEA.

Step 2:	Hold capacity building training for OGS/PAYG providers and URA staff on taxation regimes for OGS.
Owner:	NREP
Stakeholders:	NREP, USEA, URA customs officials, importers, shipping and clearing agents

USEA updates learning materials on OGS/PAYG product tax classification and application. NREP and USEA hold a series of training sessions for the OGS/PAYG sector, URA, importers, and shipping and clearing agents on use of the East Africa Taxation handbook for OGS for consistent application and enforcement of taxation on OGS products.


Step 3:	Track and capture insights into OGS tax classifications.
Owner:	MEMD
Stakeholders:	NREP, USEA, URA, MEMD

MEMD will commission research to interview selected OGS companies and URA to track and capture insights into OGS tax classification after the stakeholder engagement.


Issue 2.3 High cost of capital for OGS/PAYG companies adds to product pricing

Access to affordable and patient financing remains one of the key challenges of the OGS/PAYG sector. OGS businesses operating a PAYG model are working capital intensive and require substantial financing to cover customer receivables, inventory costs, and operation. Interest rates for local finance are prohibitively high and stringent criteria on guarantees and credit lines limits lending. Initiatives such as the UECCC’s solar working capital facility can help but require a concerted effort by all stakeholders to work.


RECOMMENDATION: Reduce financing costs for OGS/PAYG companies through dedicated funding




3 year timeline



Stakeholders:
MEMD, BoU, UECCC,
MoFPED, USEA



Market conditions addressed:
Affordability



Low feasibility,
prescriptive touch

Impact on PAYG/OGS: Availability of local financing for OGS providers at low interest rates can reduce the cost of OGS provider financing and FOREX risk, and in turn improves the affordability and availability of OGS products

Step 1:	Hold a series of stakeholder consultation dialogues with PAYG providers on challenges of financing under the UECCC.
Owner:	MEMD/UECCC
Funding source	MEMD/UECCC
Stakeholders:	MEMD, USEA, OGS/PAYG companies, UBA, FITSPAU, UECCC, MoFPED, MEMD

MEMD will hold consultative dialogue with OGS/PAYG companies and UECCC on the challenges they face in securing financing and come up with solutions to address them.

Step 2:	MEMD and UECCC work with UBA to help raise awareness and consequently increase the utilization of the solar working capital facility.
Owner:	UECCC
Funding source	UECCC
Stakeholders:	UBA, BOU, UMRA, MoFPED, MEMD, USEA, FITSPA, DFA

UECCC and MEMD will establish a working relationship with UBA to support them in raising awareness about the fund during regular UBA activities. Through this relationship, a working group shall be established to discuss pertinent issues such as fund uptake, fund challenges, proposed solutions, and actors. Key stakeholders such as the central bank will form part of the working group to offer advice given their experience with similar funds, such as the agricultural working capital facility.

Step 3:	Conduct pilot studies to track and capture insights for utilization of the OGS/PAYG finance fund.
Owner:	MEMD
Funding source	UECCC
Stakeholders:	UBA, BOU, UMRA, MoFPED, MEMD, OGS/PAYG companies, USEA, FinTech, DFA, FSDU

Based on the data from the UECCC, UBA engagement, UECCC conducts a pilot study of selected OGS/PAYG companies in utilizing the fund and captures insights into the impact of a low-cost localized credit pool for OGS/PAYG. Based on findings, the UECCC may seek guidance from UBA and BOU to ensure that commercial banks are in alignment with industry lending requirements.

