Year 4 Annual Report

USAID Southern Africa Energy Program

1 October 2020 – 30 September 2021

COVER PHOTO: Cadeau Ndivunirwahas, SolarWorks! Malawi sales agent selling solar home systems in the Dzaleka refugee camp. Photo credit: SolarWorks! Malawi

SAEP CONTRACT AND INDICATOR PERFORMANCE SUMMARY

Project Name	Southern Africa Energy Program (SAEP)
Performance Period	15 March 2017 – 14 March 2022
TEC	$69,955,372
Countries	Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa and Zambia
Implementing Partner	Deloitte Consulting LLP
Subcontractors	CrossBoundary, Deloitte South Africa, ENGAGE Energy, FLUXX, Geometric Talks, Consultec, EWT and SIAL
Performance Reporting Frequency	Quarterly
Date of Latest PMP Modification	20 May 2021
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SAEP RESULTS AS OF: 30 September 2021

Project Goals	LOP Target	Progress to Date (as of 09/30/2021)	% Achieved	Next Quarter Targets
2 Number of new grid connections or off-grid connections (PA #3)	3 million	1,551,324	51.71%	168,459
1 Number of MW from transactions that achieved financial close (PA #8)	4,000 MW	5,321.38	133%	552.35
Amount of investment mobilized for energy investment (PA #14)	$7,232 million	$6,126 million	84.71%	$862,5 million
8 Kilometers of power lines that have reached financial close (PA#20)	1,166	1,121	96.14%	0
9 Greenhouse Gas (GHG) reduced, sequestered and/or avoided (PA #21)	4,376,435 (Thousand tCO2e)	2,636,684	60.25%	1,001,526.3
3 Number of laws, policies, regulations or standards to enhance energy sector governance formally	31	33	106.45%	0

proposed, adopted or implemented (PA #23)				
7 Number of Institutions with Improved Capacity	61	58	95.08%	0
6 Energy Efficiency or Energy Conservation (GJ of electricity saved)	5,724	46,718	816%	0
10 Number of competitive procurement processes for new generation capacity implemented with USG Power Africa assistance (PA #24)	2	2	100%	0
Projected Targets for the Next Performance Period (Remaining Life of Project)				
#New connections: 1,448,676; #MWs at Financial Close: 0 MW; Investment Mobilized: $1.106 billion; # KM of T&D lines at Financial Close: 45; # New Laws, Policies and Regulations: 0; #Institutions with Improved Capacity: 3; #People Receiving Training in Global Clean Energy: 0				

ACRONYMS

Acronym	Definition
ACE-TAF	Africa Clean Energy Technical Assistance Facility
ADER	Agence pour le Développement de l'Electrification Rurale
AEF	Africa Energy Forum
AfDB	African Development Bank
ALSF	African Legal Support Facility
ARENE	The Energy Regulatory Authority
BSC	Balanced Scorecard
BERA	Botswana Energy Regulatory Authority
BGFZ	Beyond the Grid Fund for Zambia
BoD	Board of Directors
BPC	Botswana Power Corporation
BTG	Beyond the Grid
BW5	Bid Window 5 (of REIPPP Programme)
CDH	Cliffe Dekker Hofmeyr Incorporated
CENORED	Central Northern Regional Electricity Distributor (Namibia)
CEC	Copperbelt Energy Corporation
CEO	Chief Executive Officer
COR	Contracting Officer's Representative
CoSS	Cost of Service Study
CP	Cooperating Partner
CSP	Concentrated Solar Power
CTT	Central Termica de Temane
CoCT	City of Cape Town
CoW	City of Windhoek
DBSA	Development Bank of South Africa
DFID	UK Department for International Development
DOC	Development Outreach and Communications
DSM	Demand Side Management
EAEP	East Africa Energy Program
EAPP	Eastern Africa Power Pool
E&S	Environmental and Socioeconomic
ECB	Electricity Control Board (Namibia)
EDM	Electricidade de Moçambique
EE	Energy Efficiency
EEC	Eswatini Electricity Company
EGENCO	Electricity Generation Company

EMMP	Environmental Mitigation and Monitoring Plan
EMU	Electrification Management Unit
ENDE	Empresa Nacional de Distribuição de Electricidade
ENH	National Enterprise of Hydrocarbons
EOI	Expression of Interest
EPC	Engineering, Procurement, and Construction
ERB	Energy Regulatory Board (Zambia)
ESC	SAPP Environmental Subcommittee
ESCOM	Electricity Supply Corporation of Malawi
ESERA	Eswatini Energy Regulatory Authority
ESIA	Environmental and Social Impact Assessment
ESEEP	Energy Sector Efficiency and Expansion Program
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESREM	Enhancing Sustainability of Regional Energy Markets
ESP	Energy System Planning
EWSC	Eswatini Water Services Corporation
ETG	Energy Thematic Group
EWT	Endangered Wildlife Trust
ExCo	Executive Committee
FC	Financial Close
FY	Financial Year
FY	Fiscal Year
GoM	Government of Malawi
HICD	Human and Institutional Capacity Development
IA	Implementation Agreement
IAEREP	Increased Access to Electricity and Renewable Energy Production
IFC	International Finance Corporation
IFI	International Financial Institution
IPP	Independent Power Producer
IPP Office	South Africa Department of Energy (DoE) Independent Power Producer Procurement (IPP) Programme Office
IRP	Integrated Resource Plan
IRSEA	Instituto Regulador dos Serviços de Electricidade e de Água
IsDB	Islamic Development Bank
JDA	Joint Development Agreement
KfW	Kreditanstalt für Wiederaufbau (German Development Bank)
KPI	Key Performance Indicator
kV	Kilovolt

kW	Kilowatt
LCOE	Levelized Cost of Energy
LEC	Lesotho Electricity Corporation
LEDs	Low Emissions Developments
LEWA	Lesotho Electricity and Water Authority
LOC	Letter of Collaboration
LOI	Letter of Intent
M&E	Monitoring and Evaluation
MCA	Millennium Challenge Account
MCC	Millennium Challenge Corporation
MDM	Metering Development Management
MERA	Malawi Energy Regulatory Authority
MINEA	Ministry of Energy and Water (Angola)
MIREME	Minister of Mineral Resources and Energy (Mozambique)
MITADER	Ministry of Land, Environment and Rural Development (Mozambique)
MITC	Malawi Investment Trade Centre
MMGE	Ministry of Mineral Resources, Green Technology and Energy (Botswana)
MME	Ministry of Mines and Energy (Namibia)
MNRE	The Ministry of Natural Resources and Energy
MONREM	Ministry of Natural Resources, Energy and Mining (Malawi)
MW	Megawatts
NARUC	National Association of Regulatory Utility Commissioners
NDA	Non-Disclosure Agreement
NEESAP	National Energy Efficiency Strategic Action Plan
NERSA	National Energy Regulator of South Africa
OGTF	Off-Grid Task Force
OFID	OPEC Fund for International Development
OPC	Office of the President & Cabinet
OPE	Oshakati Premier Electric
OPIC	Overseas Private Investment Corporation
OSC	SAPP Operating Subcommittee
PA	Power Africa
PATRP	Power Africa Transactions and Reforms Program
PATT	Power Africa Transaction Tracker
PIM	Project Investment Memo
PIU	Project Implementation Unit
PMEP	Performance Management and Evaluation Plan
PMO	Project Management Office
PMU	Project Management Unit

PPA	Power Purchase Agreement
PPP	Public Private Partnership
PPPC	Public Private Partnership Commission
PPZ	Partial Protection Zone
PS	Permanent Secretary
PV	Photovoltaic
Q1	Quarter 1
Q2	Quarter 2
Q3	Quarter 3
Q4	Quarter 4
QOSWG	Quality of Supply Working Group
RBF	Results-based financing
RAB	Regulatory Asset Base
RAP	Resettlement Action Plan
RE	Renewable Energy
REA	Rural Electrification Agencies
RED	Regional Electricity Distribution Company
REEEP	Renewable Energy and Energy Efficiency Partnership
REFiT	Renewable Energy Feed-in Tariff
REIPPP	Renewable Energy Independent Power Producer Procurement
RERA	Regional Energy Regulatory Association
REOI	Request for Expressions of Interest
RFA	Request for Application
RFI	Request for Information
RFP	Request for Proposals
RNT	Empresa Rede Nacional de Transporte de Electricidade
ROW	Right of Way
RSSC	Royal Swaziland Sugar Corporation
RTIFF	Regional Transmission Infrastructure Fund Facility
SACREEE	SADC Centre for Renewable Energy and Energy Efficiency
SADC	Southern African Development Community
SAEP	Southern Africa Energy Program
SAPP	Southern African Power Pool
SAPP CC	Southern African Power Pool Coordination Center
SAPP OSC	SAPP Operating Subcommittee
SAPP ESC	SAPP Environmental Subcommittee
SAPP PSC	SAPP Planning Subcommittee
SB	Single Buyer
SFE	Sales Force Effectiveness
SHS	Solar Home System

SIAZ	Solar Industry Association of Zambia
SIM	Syndicat des Industries de Madagascar
SMO	System Market Operator
SOW	Scope of Work
SPEED+	Supporting the Policy Environment for Economic Development
SPV	Special Purpose Vehicle
SRUC	USAID Sector Reform and Utility Commercialization Program
SSIR	SAEP Support Information Request
STTA	Short Term Technical Assistance
TNA	Training Needs Assessment
TO	Task Order
ToR	Terms of Reference
TTP	Temane Transmission Project
TTS	Targeted Transaction Support
USD $	United States Dollar
USG	United States Government
USAID	United States Agency for International Development
USTDA	United States Trade and Development Agency
VAT	Value Added Tax
vRE	Variable Renewable Energy
WARMA	Zambia's Water Resource Management Authority
YALI	Young African Leaders Initiative
ZESCO	Zambia Electricity Supply Corporation
ZERA	Zimbabwe Energy Regulatory Authority
ZRA	Zambezi Revenue Authority
ZTK	Zambia–Tanzania–Kenya

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EXECUTIVE SUMMARY

In the financial year 2021 (FY21), the United States Agency for International Development (USAID) Southern Africa Energy Program ("SAEP" or "the Program"), completed or advanced over 97 activities in 10 countries[1] to contribute to Power Africa's goals of creating a brighter, more sustainable future for many across the Southern African region. This Annual Report ("the Report") details SAEP's successes over the past year; from transaction advisory support for large-scale energy sector projects and utility electrification efforts to assistance to solar home system (SHS) and mini-grid companies. Below is an overview of SAEP's key events, milestones, and achievements over the 12-month period (from 1 October 2020 to 30 September 2021) covered in this report.

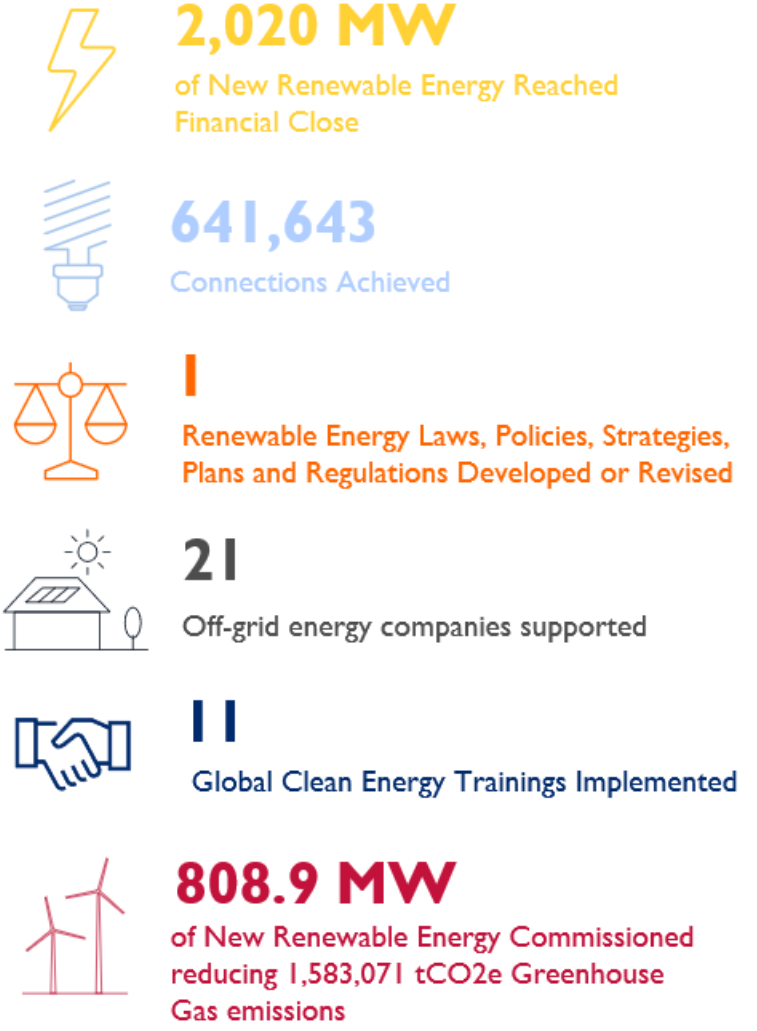

Figure 1: "BY THE NUMBERS" figures in Section 2 highlight generation and transmission projects by country with a medium or high probability of reaching financial close by March 2022

- Facilitated **financial close (FC) of 2,020 megawatts (MW)** of new renewable energy (RE) generation and transmission capacity in South Africa, Malawi and Mozambique. Over the life of the project, 5,321.38 MW of supported generation and transmission capacity has reached FC
- Achieved **641,643 connections** of which i) **292,149 were new off-grid connections** through support to SHS companies and other off-grid providers, and ii) **349,494 were new on-grid connections.** Over the life of the project, 1,551,324 connections have been supported for households and businesses
- Developed **a regulation** for the Angola's regulator to improve the enabling environment and reduce barriers to energy sector growth. Over the life of the project, 33 laws, polices, strategies, plans, and regulations have been developed or revised
- Responding to the COVID-19 pandemic, SAEP worked with Malawi's Electricity Generation Company (EGENCO) and Mozambican utility, *Electricidade de Moçambique* (EDM) to **improve the utilities' capacity to respond to disasters** by developing business continuity plans

[1] SAEP continues to not work in Zimbabwe per the guidance provided by USAID

- Supported **21 off-grid energy companies** across sub-Saharan Africa to improve market knowledge and increase sales through active transaction advisory and the development of go-to-market strategies
- Implemented **11 trainings** addressing topics such as SHS sales force effectiveness, utility production optimization, project finance, and revenue management
- Supported **Angola's electricity distribution company, ENDE, and transmission company, RNT**, to advance key tender processes under the African Development Bank's (AfDB) USD $543.5 million Energy Sector Efficiency and Expansion Program (ESEEP)
- Finalized **recommendations to Eswatini's regulator** on the Eswatini Electricity Company's (EEC) tariff application that resulted in an average **decrease in electricity tariffs**, saving consumers around USD $44 million over the next two years
- Guided the Government of Malawi in achieving key milestones to advance **the 350 MW Mpatamanga hydropower project**, including i) finalizing two critical commercial agreements, ii) onboarding a government project implementation unit (PIU), iii) facilitating seven bidder's conferences and iv) helping to advance negotiations with the prequalified bidder who submitted a full proposal for the development, financing, construction, operation, and maintenance of the hydropower plant on 17 September 2021
- Managed key activities in moving Mozambique's **Temane Transmission Project (TTP) to FC in December 2020**, including facilitating engagements between the funders and EDM to finalize the project financing plan and preparing the operational team to meet TTP's complex operational requirements

Introduction

1 INTRODUCTION

1.1 THE PROGRAM

The SAEP contract (AID-674-C-17-00002) was signed between USAID/Southern Africa and Deloitte Consulting LLP (Deloitte) on 15 March 2017. This is SAEP's third Annual Report[3] and reflects results and achievements realized in FY21 (1 October 2020 to 30 September 2021).

The objective of SAEP is to increase investment in electricity supply and access in Southern Africa by strengthening the regional enabling environment and facilitating transactions. SAEP addresses key constraints to energy sector investment, by i) strengthening regulation, ii) improving planning and procurement, iii) improving management of electricity trade, iv) demonstrating and scaling RE and energy efficiency (EE) technologies and practices, and v) providing capacity building to institutions and human resources for energy sector management.

SAEP is USAID's flagship implementing mechanism for Power Africa in the Southern African region. As part of Power Africa, SAEP works to contribute to Power Africa's continent-wide goals of increasing new power generation by 30,000 MW and increasing new connections by 60 million by 2030. (For more information on Power Africa, see the box on the next page).

Figure 2: In Year 4, the SAEP team continued to collaborate and advance activities in a remote working environment.

Over its five-year life, SAEP will meet Program-specific goals to increase electricity supply and access, and will deliver:

- 4,000 MW of new power generation and transmission capacity
- 3 million new connections

[2] Previous divider photo: Lindiwe Karim, Zuwa Energy Customer in front of her tuck shop in Malawi. Photo Credit: Zuwa Energy
[3] The full report name as per Contract Number AID-674-C-17-00002 is Annual Performance Management Progress Report

1.2 OVERVIEW

SAEP is a forward-looking program that aims to overcome the challenges of access to energy through actively advancing power sector development in Southern Africa. SAEP employs a proactive, responsive and flexible approach to the design, deployment and monitoring of interventions compatible with, and responsive to, the evolving needs of the region. SAEP recognizes that to sustainably advance the accessibility, reliability and security of the regional energy ecosystem, the Program must promote policy and regulatory reforms to improve the enabling environment. Additionally, the Program must stimulate private sector participation in the energy sector to realize new investment within the power sector.

SAEP is designed to increase electricity generation and to improve access to power in 10 countries located throughout Southern Africa[4] while objectively quantifying and measuring progress towards five key outcomes or work streams of the Program. Outcomes include:

- Outcome 1 (OC1): Improve regulation, planning and procurement for energy
- Outcome 2 (OC2): Improve commercial viability of utilities
- Outcome 3 (OC3): Improve regional harmonization and cross-border trade
- Outcome 4 (OC4): Demonstrate and scale RE and EE technologies and practices locally
- Outcome 5 (OC5): Increase human and institutional capacity

SAEP will achieve these outcomes by strategically aligning energy reform and electrification goals with investment opportunities through i) tracking and working to close transactions, ii) coordinating with local and regional resources, and iii) building human and institutional capacity. SAEP is employing a results-oriented framework for decision-making related to the identification, prioritization, and selection of intervention activities and programming to increase and accelerate private sector investment and move transactions forward for increased generation and access to electricity. SAEP's assistance to renewable energy projects and energy efficiency activities throughout Southern Africa supports decarbonization efforts and the U.S. climate change commitments.

On the following page, Table 1 shows targets and results for SAEP's Year 4 and targets moving forward into Year 5.

The rest of this document is organized as follows; Section 2 provides country-level highlights of key successes and impacts as well as challenges and mitigation strategies implemented during the year. Section 3 details SAEP's program management, finance and operations, and challenges from Year 4 coupled with risks anticipated in Year 5. A series of appendices provide details on SAEP successes, Program staffing (short-term technical assistance (STTA) and resources mobilized), performance indicators and results, and progress reporting against SAEP Year 4 Work Plan activities. This includes completing outputs and progress against the Work Plan activities and any proposed adjustments to Program delivery.

POWER AFRICA
A U.S. GOVERNMENT-LED PARTNERSHIP

Power Africa is a U.S. Government-led partnership that harnesses the collective resources of over 170 public and private sector partners to double access to electricity in sub-Saharan Africa. Since 2013, Power Africa-supported projects have added more than 12,000 MW of cleaner and more reliable electricity and more than 25 million new power connections for homes and businesses. Power Africa's goal is to add at least 30,000 MW and 60 million connections by 2030.

[4] Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa and Zambia.

Table 1 SAEP high-level results

Project Goals	LOP Target	Progress to Date (as of 09/30/2021)	% Achieved	Next Quarter Targets
2 Number of new grid connections or off-grid connections (PA #3)	3 million	1,551,324	51.71%	168,459
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#New connections: 1,448,676; #MWs at Financial Close: 0 MW; Investment Mobilized: $1.106 billion; # KM of T&D lines at Financial Close: 45; # New Laws, Policies and Regulations: 0; #Institutions with Improved Capacity: 3; #People Receiving Training in Global Clean Energy: 0				

1.3 DEALING WITH THE IMPACTS OF COVID-19 IN YEAR 4

In March 2020, the effects of the COVID-19 pandemic became a reality when many countries in Southern Africa began imposing lockdowns and travel restrictions to minimize the spread of the disease. The pandemic is emerging as a prolonged and unique crisis and responding to it has underscored the need for SAEP and counterparts in the region to accelerate the adoption of agile ways of working and value chain transformation to help manage the uncertainty.

The following summarizes the major impacts of COVID-19 on Program delivery during Year 4:

- Cancellation or postponement of meetings and workshops due to lockdowns and travel restrictions
- In-person meetings and workshops converted to virtual participation have at times lead to miscommunication or misperceptions attributable to not being able to read body language or interpret facial expressions
- Cancellation or postponement of virtual meetings and workshops due to counterparts not being able to commit to dates because of country or business restrictions as well as unreliable internet access
- Communication challenges as a result of counterparts having to work from home where some do not have access to a personal or work computer or experience unstable internet connectivity
- A delay in some generation and connection projects advancing or reaching FC due to restrictions on procurement- and environment-related activities. In some cases, electrification programs that SAEP is supporting were quite dramatically delayed because of import delays for materials as well as projects starting later than expected due to due diligence not being completed during the pandemic
- For the entire off-grid SHS market the poor economics of countries that were shut down and the difficulty of importing products threaten the ability of SHS companies to meet revenue and cash flow requirements not only from new sales, but also from pay-as-you-go customers

Woven throughout the annual report are updates on how the team delivered despite COVID-19 and the impact SAEP was able to have on advancing goals despite changing delivery scenarios. The below section provides an update on COVID activities designed to address specific concerns raised by counterparts.

1.3.1 COVID REDIRECTION ACTIVITIES

In Year 3, SAEP undertook a comprehensive review of its work plan activities and approach to delivery to understand how it can help counterparts identify and mitigate COVID-related challenges, develop and execute business continuity plans and continue improving the overall energy sector in Southern Africa. From this exercise, SAEP developed new activities to help counterparts begin to prepare for and address the challenges of operating in a post-COVID-19 environment. These activities started in Year 3 and were completed in Year 4:

- **COVID-19 Support to the Off-Grid Sector**
  - In response to COVID-19, SAEP initiated activities to proactively manage the impacts and disruptions to the off-grid and SHS industry. The COVID-19 related assistance through these activities was provided to SHS companies and sector-wide counterparts in Malawi, Mozambique and Zambia. In Malawi, SAEP, with USAID approval, provided the SHS grantees with an advance to assist with funding and liquidity issues and extended the period of performance of the grant from June 2021 to 17 December 2021.

- **COVID-19 Support to Utilities**
  - EGENCO: SAEP supported EGENCO to improve the utility's capacity to respond to disasters by developing business continuity plans. On 30 April 2021, SAEP conducted a virtual capacity building session for the EGENCO Board of Directors (BoD) to present and explain the process and plans developed as well as the BoD's role in making the business continuity system fully operational and sustainable. SAEP provided a number of important deliverables such as the Business Continuity Management System, the Business Continuity Management Policy, the Business Continuity Management Plan, the Business Contingency Plan for COVID-19, and a risk database tool that integrates specific risk information and all business continuity management information. EGENCO will incorporate these into its recently established risk management system. The adoption of the business continuity tools will improve EGENCO's risk response process to a range of contingencies including pandemics, water supply disruptions, climate change-related events, as well as other events or circumstances that adversely affect the utility's macro-economic context

  - EDM: EDM: SAEP worked with EDM's COVID-19 Task Force to review and improve the utility's emergency response and business continuity plans. SAEP assisted EDM in developing a robust planning process and financial model to mitigate the impact of COVID-19 on its operations and business performance. A key component was the development of a cash flow model that contains a forecast of EDM's liquidity (revenue generation in the coming periods vs. expenses). The model has been designed with the option to change key variables to assess the impact on cash flows for each scenario. EDM has embraced the processes provided, implemented the business continuity plan and is managing the mapped risks through the EDM task teams established with SAEP's assistance.

Major Activities

By Country During the Reporting Period

2 MAJOR ACTIVITIES BY COUNTRY

In Year 4, SAEP initiated and implemented activities in: Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mozambique, Namibia, South Africa, and Zambia. Across the region, the Program collaborated with national ministries, utilities, transmission and distribution companies, regulators, cooperating partners, international financial institutions (IFIs) and private companies, including Independent Power Producers (IPPs) and SHS providers. Figure 3 provides an overview of major Year 4 activity highlights by country.

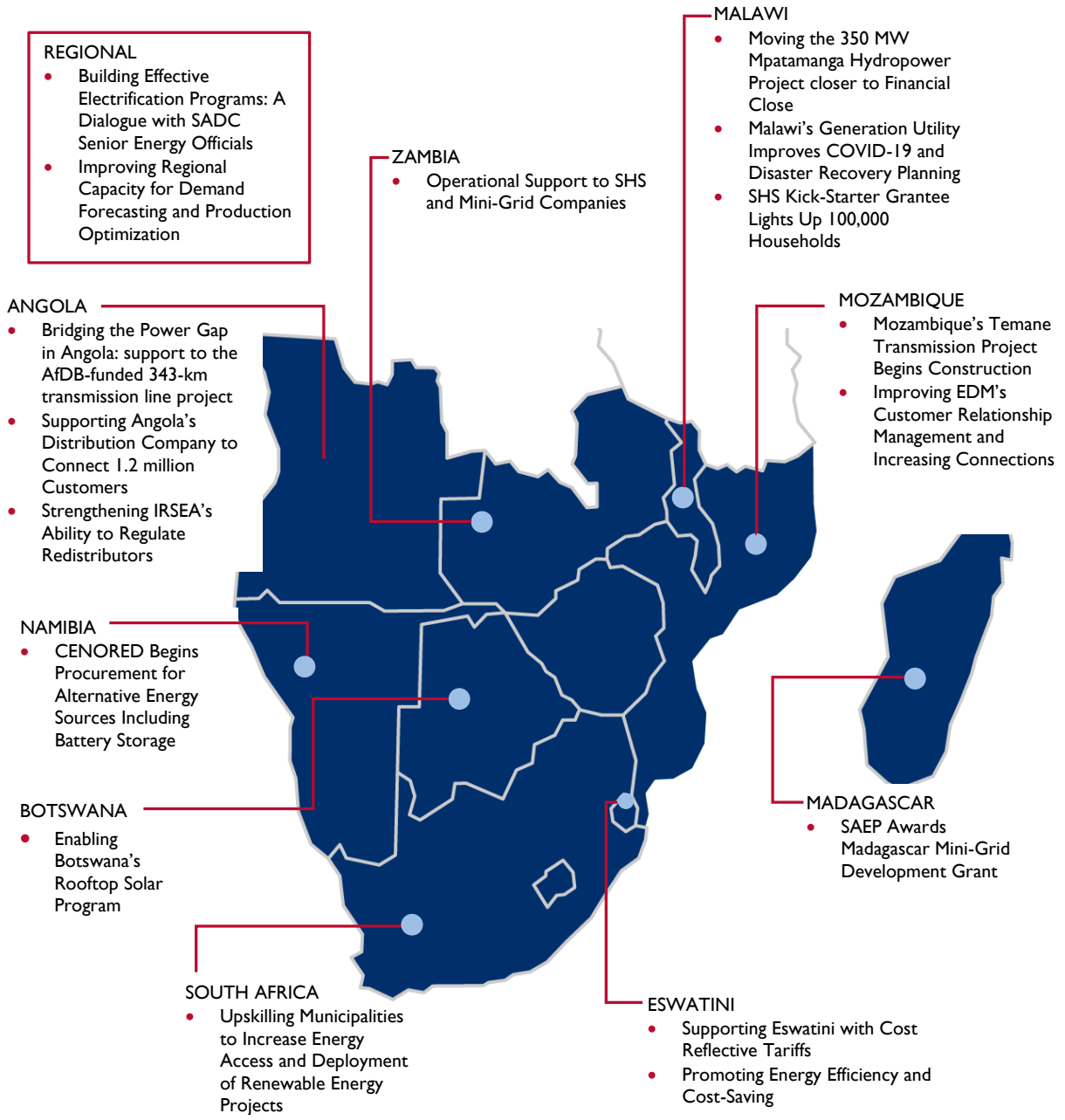


Figure 3: Overview of SAEP's major activities per country

[5] Previous divider photo: Construction taking place at the Excelsior Wind Farm in the Western Cape. Photo Credit: USAID SAEP

2.1 Angola

Angola's current electrification rates are estimated at 45% in most cities and around 6% in rural areas. The Government of Angola has set targets of 9.9 gigawatts (GW) of installed generation capacity and a 60% electrification rate by 2025.[6]

BY THE NUMBERS

85,226
Actual Connections

479,358
Projected Connections

1
Laws/Policies Proposed/Revised

In Year 4, SAEP continued to support Angola's electricity distribution company, ENDE, and transmission company, RNT, to advance key tender processes under the AfDB USD $543.5 million Energy Sector Efficiency and Expansion Program (ESEEP). SAEP also helped ENDE to prepare technical specifications for the installation of advanced metering as part of the World Bank's Revenue Protection Program, which will lead to 200,000 connections in Angola. To strengthen the authority and independence of Angola's Regulatory Authority for Energy and Water, *Instituto Regulador dos Serviços de Electricidade e de Água* (IRSEA), SAEP worked with the regulator on activities aimed at improving the regulator's ability to manage redistributors.

2.1.1 TOP ACHIEVEMENTS AT A GLANCE

Bridging the Power Gap in Angola

One part of the AfDB's energy program entails the construction of a 343-km, 400 kilovolt (kV) transmission line that will join the central and southern "grid islands" for the first time. This new transmission infrastructure will allow for the evacuation of around 1,000 MW of primarily low-cost hydropower from the northern Kwanza River basin to the capital region and population centers in the South, providing an opportunity to replace less-efficient and more expensive diesel-powered generation facilities with cleaner options. The integration of power systems across the country will also address power shortages and improve grid reliability.

Angola's national transmission company, RNT, has the mandate to complete the AfDB-funded Central–South transmission line project. SAEP began working with RNT in October 2019 to establish and operationalize a Project Implementation Unit (PIU) to manage the procurement and planning aspects of the transmission project.

In Year 4, as part of the continued assistance to operationalize the PIU across the different PIU sections, namely engineering, project coordinator office, environmental and social, and procurement,

Figure 4: Camama Substation and in Luanda, Angola. Photo Credit: USAID SAEP

[6] https://www.usaid.gov/powerafrica/angola

SAEP supported RNT in advancing key activities and meeting project milestones. Following a scope of work update in Quarter 2 to provide more hands-on support, SAEP intensified its advisory approach, including appointing an additional procurement specialist to assist RNT with project coordination efforts. After finalizing the contract negotiations with the resettlement action plan (RAP) implementation consultant in June 2021, the AfDB informed RNT that the procurement method used for the RAP consultant had to be changed due to the value of the contract, which necessitated a relaunch of the process (and evaluations). With SAEP's support, RNT has begun updating all RAP procurement documents in preparation for the new process.

The main highlights from Year 4 are as follows:

Under **Procurement**, SAEP assisted RNT to:

- Develop the procurement plan and obtain approval from the AfDB, which enabled the commencement of many of the procurement activities, including the procurement of small goods, IT equipment, office space and software
- Advance the recruitment of the owner's engineer (OE), which at the end of Year 4 is in its final stages with RNT conducting contract negotiations with the selected bidder
- Conduct the technical evaluation for the engineering, procurement and construction (EPC) contractor. The OE will prepare the bidding documents in the third and fourth quarters of 2022
- Finalize and publish the tender documents for consulting services to conduct a feasibility study for the Gove–Menongue transmission project. This is part of the AfDB ESEEP I loan, as both projects aim to further increase electrification rates and also strengthen the internal transmission network. The Gove-Menongue line will also provide power to several mines in the Menongue region that currently do not have access to power, therefore boasting production. The power will be evacuated from the hydro generated power in the Gove region
- Draft the monitoring and supervision consultant terms of reference (TOR) and request for expression of interest (EOI)
- Develop the TOR to hire five individual consultants who will provide hands-on support to the RNT PIU. The recruitment of the Social Safeguards, Financial Management and Procurement Specialists are currently underway; the Project Manager, Gender and Environmental Specialist hiring processes will commence in Year 5
- Finalize the prequalification of two service providers who will be submitting their proposals for the rental of office space in Luanda for the PIU

Under **Environmental and Social**, SAEP assisted RNT to:

- Develop a gender action plan – a critical requirement according to the AfDB's Project Appraisal Report and important for RNT to address gender inequality in employment through the lifecycle of the project and to address Gender-Based Violence (GBV) and treatment of women in general in the communities the project will impact on
- Kickstart the development of an Environmental & Social Management System (ESMS)
- Obtain the environmental license from Angola's National Directorate for Prevention and Evaluation of Environmental Impacts (DNPAIA)– a crucial document and prerequisite for all resettlement action plan (RAP) work in the field and for construction to begin

Under **Engineering**, SAEP assisted RNT to:

- Reviewing the preliminary designs and technical specifications for both substations and transmission line. This included additional preparations of all technical documentation needed by the OE consultant to complete its tasks and avoid any issues or risks. This work will be finalized in the first quarter of Year 5 as part of the onboarding of the OE consultant
- Transfer the licenses for Microsoft Teams/SharePoint where the project data room is currently being implemented. MS Teams/SharePoint is the platform wherein the PIU official data room has been set up and is also the space where all project related document collaborations are executed. Additionally, MS Teams is the primary mode of communication for all internal and external project meetings

"We managed to reach many of the acquisition and project milestones, regardless of the many challenges that 2020 brought (which included new ways of working), and as the RNT PIU, we would like to thank Power Africa for the role it played in the project in November 2019 when we were establishing the PIU, and in the beginning of 2020 when we started to operationalize it. We look forward to the continued collaboration on this important project that will benefit the Angolan people in the future.

I am very happy to be part of this exciting journey. I learned a lot and I look forward to what's to come. Thanks to the collaborative effort and support from the AfDB and Power Africa, RNT is well on its way to implementing the Central–South transmission project." Engineer Francisca Pereira, RNT PIU Project Coordinator

From the initial setup and operationalization of the PIU, SAEP has focused on skills transfer to enable the RNT PIU to continue with delivery once SAEP's assistance to the project comes to an end. In consultation with the different PIU sections, SAEP identified skills gaps and presented topic-specific training as part of the weekly technical working sessions. In Year 5, SAEP will push to finalize the key procurement milestones. SAEP and RNT will implement tasks based on the transition plan that SAEP developed in Year 4. The transition plan details the next steps for RNT to implement before SAEP's assistance comes to an end, projected for end-September 2022. This document aims to help RNT efficiently continue delivering across all PIU sections that SAEP is supporting (engineering, procurement, project coordination office, and environmental and social). The tracking tools SAEP assisted RNT to develop, namely the project procurement plan and the monthly progress and planning tools, are essential to achieving a seamless transition and continuity.

Supporting Angola's Distribution Company to Connect 1.2 million Customers

SAEP continues to assist Angola's electricity distribution company, ENDE, to develop and implement internal systems and processes required to effectively and efficiently install over 1.2 million prepaid meters in the coming five years under the AfDB-funded ESEEP-I. SAEP support entails technical advisory and on-the-job training as the ENDE PIU prepares the required tender packages for i) the installation of prepaid meters and ii) systems and integration services. In Year 4, ENDE made great progress on both tenders. In addition to the two main tenders, SAEP also assisted ENDE to advance tenders for two additional services – supervision services and translation and interpretation services. SAEP worked closely with the ENDE PIU, guiding tender document preparation and evaluation procedures. To transferring technical expertise, SAEP conducted numerous workshops with ENDE's IT and Commercial departments while they were developing the technical specifications for the prepaid metering and the systems and integration services tenders.

The **prepaid metering tender** is at the prequalification stage with the ENDE-appointed evaluation team concluding the process of evaluating 22 submissions from interested bidders and compiling an evaluation report. The prequalification stage is the first stage of a two-stage procurement process prescribed by the AfDB. The evaluation report identifies the shortlist of prequalified bidders.

Once the AfDB approves the shortlist, ENDE will proceed to issue an RFP to the shortlisted bidders as part of the second and final stage of the procurement process. The prepaid metering tender will put in place the most ambitious electrification plan in the country, connecting 400,000 new customers throughout the country. The implementation of the meters will be allocated over four geographic Lots, which will be executed by several contractors.

The AfDB approved ENDE's evaluation report shortlisting six companies for the **systems and integration services tender**. The bank then gave the go-ahead for ENDE to prepare the Request for Proposal (RFP) documentation to be issued. The RFP documentation includes an RFP bidding document and a TOR. Towards the end of Year 4, the AfDB provided the first set of comments, for ENDE's perusal, on the RFP bidding document. ENDE still requires feedback from the AfDB on the TOR.

Regarding the tenders for the two additional services: ENDE resubmitted the request for EOIs and TOR for the **supervision consulting tenders** to the AfDB. The resubmission is to reflect an approach according to which two tenders will be issued and two contracts awarded to increase the efficiency of the supervisory services. The aim of the tenders is to identify and select companies that will oversee the installation of the prepaid meters. The AfDB is also reviewing the bidding documents for the recruitment of a consultancy firm that will be responsible for **translation and interpretation services** (Portuguese–English–Portuguese) for both ENDE and RNT.

ENDE has proven to be capable and adaptable in executing procurement processes based on SAEP's guidance and approach as a trusted advisor.

In Year 4, the AfDB also approved the ENDE–RNT integrated procurement plan, which SAEP helped to develop. The plan is an overarching guidance document, incorporating the procurement timeframe and actions for both the distribution (ENDE) and transmission (RNT) executing agencies under ESEEP Phase 1. As the AfDB is the source of the funding for ESEEP Phase 1, it has to review and approve all plans and procurement documents for both executing agencies. For ENDE, in particular, the approval permits ENDE to issue tender documents to procure and install the prepaid meters and the supporting IT systems.

Figure 5: Electricity access is crucial for Avelino Martins's carpentry business in Luanda. Photo Credit: USAID SAEP

Strengthening IRSEA's Ability to Regulate Redistributors

SAEP assisted Angola's regulatory authority, IRSEA, to develop a plan for the role it will play in helping Angola to meet its electrification goals. SAEP and IRSEA have developed a roadmap that sets forth an initial four priority activities for IRSEA to accomplish with SAEP support towards meeting this goal.

A notable part of SAEP's support to IRSEA in Year 4 was drafting provisional licensing rules for suppliers, known as *comercializadores*, serving customers on behalf of or in place of the national distribution company ENDE. SAEP finalized a draft set of rules titled "Rules for *Comercializadores*" to IRSEA in March 2021. These rules will formalize IRSEA's regulatory authority over these entities, bringing them all under one "regulatory umbrella" and providing a written instrument stipulating the *comercializadores'* responsibilities to their customers and IRSEA. In April 2021, IRSEA indicated that it had accepted the rules and presented them to Angola's Ministry of Energy and Water (MINEA). Once finally adopted by the Council of Ministers, these rules will provide customers of *comercializadores* the same protections afforded other electricity customers, including paying no more than the authorized tariffs that all ENDE customers pay. This unification of regulation is critical to the overall management of electrification and access to electricity in Angola.

To enhance transparency in the electricity sector and exert regulatory independence, SAEP supported IRSEA to review the reporting requirements of regulated utilities. IRSEA, through Angola's rulemaking process, put in place communications regulations on 22 February 2021. The regulations established annual reporting requirements for licensees to report on their activities to IRSEA. These rules provide a mechanism through which the regulated entities would submit annual reports/information to the authority. The reporting requirements will give IRSEA insight into the utilities' performance. After a review of the regulations, SAEP recommended that these reporting requirements be expanded to include a provision for IRSEA to hold annual hearings and question the utilities on their performance. The reporting will occur in February 2022 whereby the hearings will be organized. When this recommendation is executed, holding these hearings will help institutionalize IRSEA's authority over the utilities and, most-likely lead to an improvement of service quality and access to electricity for the Angolan public.

2.1.2 ADDITIONAL HIGHLIGHTS FOR ANGOLA

In Year 4, SAEP engaged in the following additional activity:

- SAEP supported ENDE to prepare tender documents for the installation of advanced metering infrastructure for medium- and high-voltage customers as part of the World Bank's Revenue Protection Program; the Program will lead to 200,000 connections in Angola. A Presidential decree, which gave the minister of finance the mandate to sign the loan agreement between Angola and the World Bank, was issued in Angola on 27 April 2021. The program's objectives will be achieved through:
    - Installation/replacement of post-paid smart meters, meters boxes, modems for remote communication, and voltage and current transformers at the customers' premises
    - Installation/replacement of multifunctional post-paid smart meters and voltage and current transformers at the substation for energy balance
    - Establishment of a Metering Control Center as a new organizational unit within ENDE's Commercial Department, staffed with qualified personnel and training of its operators
    - Incorporation of a Meter Data Management software package, including the development of the advanced metering infrastructure SAP module and training of its operators

During Year 4, SAEP's support focused on developing the technical specifications at the core of the tender documents. The process involved the development of smart meter specifications, meter data management systems and the meter control center specification. SAEP prepared a draft document and led workshops where ENDE and SAEP technical teams aligned on the content and built it out in the TOR and other procurement documents. The next step is to meet with the MINEA Project Coordination Unit (PCU) to finalize the tender documents for submission to the World Bank for No Objection. Going forward in Year 5, SAEP will be providing assistance in the procurement process and supporting ENDE with the evaluation reports which upon approval by the AfDB will result in the contract award.

"*SAEP provided advice to the AfDB and World Bank ENDE Project Implementation Units on specific requirements and procedures for procurement and program management. In addition, ongoing technical assistance from SAEP and the support provided to the ENDE's Technical Departments were instrumental in the timely and high-quality preparation of the terms of reference for the complex projects covered by the AfDB and World Bank-financed programs*." Mr. Isequiel Manuel, Advisor to the ENDE BoD and Coordinator of the World Bank and AfDB PIU

2.2 Botswana

BY THE NUMBERS

197 MW
Pending Financial Close

Botswana's total installed capacity for power generation is approximately 900 MW, with the Morupule B coal-fired power plant providing more than half of this capacity.[7] Since construction, Morupule B has run significantly below capacity, necessitating a remediation/restoration program that is currently underway. Botswana's national electrification rate of 70% is higher than many other Southern African countries. However, to meet present electricity demand, Botswana relies on electricity imports from South Africa and the Southern African Power Pool (SAPP), despite having considerable natural resources that – if tapped – could drive generation in amounts sufficient to power Botswana and export throughout the region. In particular, Botswana has ample solar resources that could be used for both domestic use and export. As such, Power Africa is advancing a Mega Solar project that could transform Botswana from a net importer and consumer of unreliable coal power, to a significant producer and exporter of renewable solar power.

In Year 4, SAEP focused on less activities in the country but assisted the Ministry of Mineral Resources, Green Technology and Energy (MMGE) with the launch of the Rooftop Solar (RTS) program and provided transaction assistance to a coal-bed methane and solar project. SAEP also continues to monitor the Botswana Power Corporation's (BPC) 100 MW solar PV procurement and make itself available for support to advance the process.

2.2.1 TOP ACHIEVEMENTS AT A GLANCE

Enabling Botswana's Rooftop Solar Program

One of the Government of Botswana's initiatives to increase the contribution of solar energy to the national energy supply mix, outlined in Botswana's National Energy Policy of 2015, was the launch of a RTS program in November 2020. As a first of its kind in Botswana, this program allows individual consumers to generate their own electricity and sell excess back to the BPC.

The launch of the RTS was a culmination of support that SAEP provided to the MMGE in Year 3, during which year the Program assisted the Ministry with developing RTS guidelines. The guidelines, adopted in June 2020, define the framework, processes, and pricing for installing small-scale grid-tied solar PV systems. The aim of their development was to stimulate the clean energy sector in Botswana, add some generation capacity, and give consumers the opportunity to reduce their electricity bills. In its first stage, RTS allows a total of 10 MW of this type of self-generation by consumers; individual commercial and Industrial customers are permitted to install up to 1 MW of capacity while domestic/residential consumers may install up to 35 kilowatts (kW).

As of September 2021, the program had received 108 applications with 51 being approved, constituting a total capacity of 1504.3 kW. These 51 approved applications include 35 domestic consumers (198.1 kW) and 16 commercial and industrial consumers (1306.2 kW). By the end of Year 4, 11 facilities had been fully commissioned representing a total capacity of 573.6 kW.

[7] Nameplate capacity of 600 MW as per the BPC Annual Report 2020, https://www.bpc.bw/about-us/Annual%20Reports/BPC%20Annual%20Report%202020.pdf

In preparation for the RTS launch event at the Botho University in Gaborone, SAEP supported the MMGE to draft the official invitations and event agenda, review the Honorable Minister Lefoko M. Moagi's official remarks, develop talking points for the U.S. Ambassador to Botswana, Craig Cloud, and print the RTS guidelines as a booklet to be distributed to event attendees.

Figure 6: U.S. Ambassador to Botswana, Craig L. Cloud and MMGE Minister, Honorable Lefoko Moagi, launched the RTS program at the Botho University in Gaborone in November 2020. Photo Credit: USAID/Power Africa

2.3 Eswatini

The Kingdom of Eswatini is a landlocked country that depends on South Africa to supply nearly 80% of its power needs. Like most countries in the region, Eswatini has abundant renewable energy resources, especially from solar and wind. To enhance energy security and self-sufficiency, the Government of Eswatini has embarked on developing additional generation capacity from renewable energy sources to meet the country's electricity demand and adopt energy efficiency programs.

BY THE NUMBERS

20 MW
Pending Financial Close

To assist Eswatini in reaching energy independence, in Year 4, SAEP continued to work with the national Ministry of Natural Resources and Energy (MNRE) and Eswatini Water Services Corporation (EWSC) to plan for generation expansion and address energy efficiency, while supporting the Eswatini Energy Regulatory Authority (ESERA) in evaluating certain parts of the Eswatini Electricity Company's (EEC) tariff application. SAEP is also tracking two solar projects with the regulator.

2.3.1 TOP ACHIEVEMENTS AT A GLANCE

Supporting Eswatini with Cost Reflective Tariffs

Fair regulation in the energy sector creates an environment where utilities can provide reliable services to customers at reasonable prices and gives the private sector confidence to invest in new power projects.

In October 2020, the EEC applied for an average tariff increase of 7.16% for each of the two subsequent financial years. ESERA requested SAEP's assistance in evaluating certain parts of EEC's tariff application, and provide additional guidance to the regulator as they determined the regulatory asset base, the weighted average cost of capital, and staffing costs, among other items. ESERA adopted SAEP's recommendation to consider a 10% reduction in the regulatory asset base, a reduction in the weighted average cost of capital from 7.92% to 7.28% and the imposition of a 1% productivity factor on wage and salary expenses.

"The Authority would like to extend appreciation to the USAID Southern Africa Energy Program, a Power Africa initiative, for the assistance and guidance provided during the tariff review, as well as the level of commitment and professionalism with which it was delivered" – Vusumuzi Mkhumumane, Former CEO, ESERA

Following guidance from SAEP, ESERA also did not allow depreciation expense on non-utility-funded assets, which on its own saved Eswatini ratepayers USD $5.1 million.

In its final decision, ESERA authorized tariffs that would result in a revenue requirement of USD $154 million in 2021 to 2022 and USD $174 million in 2022 to 2023. The authorized amounts were approximately USD $21 million and USD $23 million less than the requested amounts, yielding a savings of USD $44 million to Eswatini consumers over the period.

The new tariffs, an approximate average 1% decrease, became effective on 1 April 2021. ESERA also adopted further SAEP recommendations, including a requirement that the EEC conduct studies to determine appropriate staffing levels and the proper debt-equity ratio.

In addition to making adjustments to the EEC's authorized revenues, ESERA adjusted the amounts that business customers pay for electricity, relative to domestic customers. Historically, business customers have spent more than their actual cost of service and have subsidized domestic customers' electricity bills. This rebalancing of rates so that both classes of customers pay an amount closer to their cost of service reduces the probability that business customers will leave the grid and generate their own electricity.
For more details on support to ESERA, refer to the success story section in Appendix A.

Promoting Energy Efficiency and Cost-Saving

High energy costs constitute an important barrier to Eswatini's goal of achieving universal water and sanitation access by 2030. At the EWSC, energy costs associated with pumping and treating water can be more than 40% of the total budget for operations and maintenance. Measures to reduce these costs would help make water more affordable for the poorer segments of the population. Increasing energy use efficiency also contributes to the country's broader social, economic, and environmental goals and frees up additional electricity for increased access and/or to reduce greenhouse gas emissions. After the SAEP-supported energy efficiency audit of 2019, EWSC installed energy and process meters at the main water pumping and treatment facilities. This has enabled EWSC to better monitor and continuously review its operational procedures to reduce energy consumption and operating costs. From these measures, EWSC saved about 18,360 Gigajoules in 2021, beating the estimate from the energy audit report. The EWSC also implemented key technology improvements directly targeting reductions in electricity costs. Key among these was the installation of power factor correction equipment for the control of pump motors. The savings enabled by these installations will allow the EWSC to recoup the investments in two years or less while also helping to keep user tariffs low.

In Year 4, SAEP continued to support EWSC, building on equipment investments by helping the utility to establish data collection, analysis, and reporting systems. These will inform EWSC's decisions on revised working procedures and future investments to maximize the energy efficiency program gains. SAEP held fortnightly working sessions with a functionally representative team, from the executive team and engineers to the operatives, to promote an unbroken chain of coordination. EWSC showed outstanding commitment to the working sessions including participation by the Chief Executive Officer, Jabulile Mashwama, an engineer with a background in energy efficiency. As a result of SAEP assistance, EWSC will acquire the capacity to more efficiently manage the utility and to measure improvements in both monetary and energy terms.

2.3.2 ADDITIONAL HIGHLIGHTS FOR ESWATINI

In Year 4, SAEP was engaged in the following additional activities:

- During the public meetings on the tariff application, customers in Eswatini voiced concern that connection charges were difficult to understand and that the method used to calculate them was not transparent. At ESERA's request, SAEP reviewed the EEC's connection charge practices for transparency, clarity and consistency with ESERA's Connection Charge Guidelines. Following a thorough review of EEC connection charge documentation, coupled with direct feedback from the EEC, SAEP provided recommendations to ESERA in July 2021, concluding that the EEC was not following ESERA Guidelines. SAEP then developed a model that could be used by the EEC to calculate connection charges. SAEP also presented alternative approaches to imposing connection charges.

  > *"ESERA is grateful for the technical support provided by SAEP in the development of the Connection Charge Costing Model for the Eswatini Electricity Supply Industry.*
  >
  > *We are looking forward to a continued support and cooperation in other technical areas."*
  > Sikhumbuzo Tsabedze, ESERA CEO

  The model illustrates how to calculate connection charges for those customers within 300 meters of a connection point, for those more than 300 meters from a connection point, and for calculating refunds for customers that have paid for line extensions, as part of their connection application, to which other customers were subsequently connected.

  Additional transparency and predictability will enhance the credibility of both EEC and ESERA and may, at the margins, increase connections in the country, since potential applicants for electricity service will better understand how the national utility calculates charges. In Year 5, SAEP will continue to follow up with ESERA on the adoption and implementation of the recommended connections charges calculation approach.

- A purposeful and effective national energy efficiency and conservation program needs to be sustained over a long time before results begin to show. This calls for a well-structured institutional framework. In Year 4, SAEP supported the Kingdom of Eswatini to establish the Eswatini Agency for Sustainable Energy (EASE). In September 2021, a process began to establish the EASE, which will operate as a company under the University of Eswatini. The EASE will broadly advance the objectives of Eswatini's Energy Efficiency Policy. Among the EASE functions will be to promote measures that reduce energy costs in the production of goods and services, making the national economy more competitive and helping to reduce the cost of living. EASE will also encourage renewable energy use as a measure for promoting sustainability and environmental protection.

  The establishment of the EASE is the culmination of SAEP support to the Kingdom of Eswatini to establish policy, planning and strategic frameworks to pursue national goals in energy efficiency and renewable energy. In 2020, SAEP helped the MNRE to formulate the National Energy Efficiency Strategy and Action Plan (NEESAP), which will guide the EASE in discharging its functions. The EASE will be instrumental in driving energy efficiency targets of 80,000 gigawatt-hours per year by 2025, as laid out in the NEESAP.

2.4 Lesotho

Currently, Lesotho generates 72 MW of hydropower through the Muela hydropower plant. The country also imports electricity from Mozambique and South Africa to meet the total energy demand, which currently stands at 145 MW. Lesotho has an abundance of renewable energy resources such as solar, wind and water. Realizing the potential of these resources is a focus of the Lesotho Energy Policy 2015–2025. The Government of Lesotho has set a target to increase the use of renewable energy resources by 200 MW by 2020. The Lesotho Electricity Company (LEC) is responsible for electricity transmission and distribution to most electricity consumers in Lesotho.

BY THE NUMBERS

125 MW
Pending Financial Close

As such, SAEP focused previous efforts in Lesotho on providing operational support to the LEC to improve the utility's strategic planning and financial accountability. In Year 3, SAEP supported the LEC with the implementation of its new strategic plan. However, the political uncertainty and issues with utility staff in Lesotho have caused delays with further assistance to the LEC. In addition, the general non-responsiveness of LEC management to SAEP's offers of support meant that the program did not continue any technical assistance in Lesotho in Year 4.

SAEP stands at the ready to support Power Africa partner One Power's Neo I solar PV project and three further renewable energy projects. There was limited assistance required in Year 4 except some light touch support. SAEP will provide technical and financial advisory support as required on this transactions and other renewable energy transactions that are in earlier stages in the country in the coming year.

2.5 Madagascar

The lack of access to reliable energy has been a major obstacle to Madagascar's economic and social development. Infrastructure is outdated and existing generation, transmission and distribution assets are not able to meet growing demand. With frequent power outages, the Government of Madagascar has been under extreme pressure to find solutions.

In Year 4, SAEP continued to provide technical advisory support to the private sector as it develops on- and off-grid projects, including through the award of grants to mini-grid developers.

BY THE NUMBERS

197 MW
Pending Financial Close

49,767
Actual Connections

14,125
Projected Connections

2.5.1 TOP ACHIEVEMENTS AT A GLANCE

SAEP Awards Madagascar Mini-Grid Development Grant

During a virtual live event on 23 November 2020, SAEP announced the winners of the Madagascar Mini-Grid Development Grant: Autarsys Madagascar, *Hydro Ingenierie Etudes Et Realisations* (HIER) and Henri Fraise Fils & Cie. USAID hopes to support economic development and improve the lives of the Malagasy people with a USD $1.2 million grant to build or extend mini-grid electricity in rural areas. The event included remarks by U.S. Ambassador to Madagascar, Michael Pelletier; Madagascar Minister of Energy, Water and Hydrocarbons, Christian Ramarolahy; and Power Africa Coordinator, Mark Carrato.

During the virtual award ceremony, Ambassador Pelletier said that "*Mini-grids remain the best solution for remote areas as they are a renewable energy source. But the private sector often encounters problems in accessing funds to implement their projects. This new source of energy can power several machines used at homes and companies. This system therefore helps companies to carry out their activities and create jobs in the region.*" In response, Minister Ramarolahy expressed his appreciation of USG support and recognized the importance of the grant for rural Madagascar where the program is expected to electrify an additional 5,200 businesses and households.

The Malagasy media reported on the grant award event:

- The Minister of Energy and Hydrocarbon Christian Ramarolahy said, " *I am happy that other technical and financial partners have started to follow the same path as USAID*," *La Vérité* reported
- *La Gazette* also covered the story and characterized the United States' decision to support the private sector in electrifying rural areas as a "judicious choice"
- *Orange.mg* republished USAID's press release in full while *Midi* and *Les Nouvelles* printed excerpts

SAEP developed and showcased a video[8] about the grant program during the event. The event was executed with great success, thanks to a collaborative team effort between SAEP, USAID/Madagascar and Power Africa.

[8] Link to the Madagascar Mini-grid Development Grant video: https://www.youtube.com/watch?v=H0RgL8k3ujQ&ab_channel=PowerAfrica

The Madagascar grant awardees have been making steady progress, with two companies receiving equipment shipments and the third company acquiring the land permit for its mini-grid. The next steps will include assisting the companies to mitigate risks to their schedules, such as shipping delays, customs clearance issues and final authorizations from the rural electrification authority, *Agence de Développement de l'Électrification Rurale* (ADER), to bring the mini-grids online during the first half of the 2022 calendar year.

Figure 7: Private sector mini-grids have an important role to play in socio-economic development in rural Africa. Photo Credit: Henri Fraise Fils & Cie

2.5.2 ADDITIONAL HIGHLIGHTS FOR MADAGASCAR

In Year 4, SAEP engaged in the following additional activities:

- A leading distributor of SHS, Baobab+, expressed an interest in receiving additional technical support from SAEP. This support was provided in Year 4 in the form of Sales Force Effectiveness (SFE) training delivered virtually to the company's managers. Although well-received, the initial training, delivered over two days, encountered some challenges mainly due to poor network connectivity. This necessitated an in-person refresher training session delivered in French and Malagasy to a class of 20 Baobab+ staff members in September 2021. Additionally, SAEP adapted and provided agent training material for the Baobab+ training app. Baobab+ will upload the material to its app during quarter one of Year 5. In Year 5, SAEP will track the impact of the training intervention on Baobab+'s sales and continue to provide light support to the company to sustain its impact.

- In Year 4, SAEP started conducting a small pilot of industrial energy efficiency with two Malagasy industry association, *Syndicat des Industries de Madagascar* (SIM) member companies. SIM selected the companies after issuing a call for applications. The pilot, which will be concluded in the first quarter of Year 5, will help the two companies identify energy efficient projects and develop proposals for their funding by the Sustainable Use of Natural Resources and Energy Finance (SUNREF) project. After the pilot is concluded, SAEP will continue to provide light-touch support to SIM as it considers scaling the industrial energy efficiency program.

2.6 Malawi

With a population of around 18 million and a domestic generation capacity of only 439 MW[9], Malawi experiences electricity shortages regularly, with load shedding sometimes exceeding eight hours per day during the dry season. As the population continues to grow, the electricity supply/demand gap will only worsen unless remediation mechanisms are put in place, such as regional interconnection and new generation.

BY THE NUMBERS

1,020 MW
Reached Financial Close

466 MW
Pending Financial Close

99,202
Actual Connections

117,789
Projected Connections

In Year 4, SAEP continued to work closely with the Government of Malawi and the private sector to move generation and transmission projects forward and supporting utility improvement endeavors. Focus areas included i) operational support to the SHS Kick-Starter grantees; ii) improving EGENCO's business continuity systems and plans as part of the response to the impact of COVID-19; iii) transaction advisory services to the Government of Malawi on the 350 MW Mpatamanga hydropower project; and iv) support for the Electricity Supply Corporation of Malawi's (ESCOM) variable renewable energy (vRE) integration.

2.6.1 TOP ACHIEVEMENTS AT A GLANCE

Moving the 350 MW Mpatamanga Hydropower Project closer to Financial Close

SAEP is serving as the transaction advisor to the Mpatamanga Hydropower Project, which on 11 February 2020 launched the first competitive tender in Africa to identify a strategic sponsor to develop, finance and operate a large-scale hydropower project. SAEP's transaction advisory team guides the procurement process and the diverse set of advisors supporting the government in this effort. Mpatamanga will add 350 MW of renewable energy to the country's generation capacity, thereby diversifying Malawi's energy profile with renewable energy and ultimately reducing its reliance on fossil fuel sources. Further, 310 MW of Mpatamanga will be dispatchable power, unlocking additional renewable energy generation potential in Malawi. Its dispatch pattern will reduce output during the day and increase output during the evening, accommodating additional PV and wind generation integration. The project is expected to achieve FC during 2023 and will take 52 months to build.

In Year 4, SAEP supported the Government of Malawi during the procurement process for a project sponsor, including facilitating seven virtual bidders' conferences and coordinating with the government's advisors to respond to bidders' questions. Following SAEP's assistance to the government's successful request for a USD $6 million advance on its International Development Association loan for use of additional advisors, SAEP helped the government to establish and onboard a PIU that will oversee government responsibilities related to the use of the loan advance.

[9] https://www.usaid.gov/powerafrica/malawi

On 17 September 2021, the bidder submitted its bid for the appointment as project sponsor, a major milestone on the project. The project sponsor is the key player in taking the project to FC. With technical support from SAEP, the Government of Malawi began evaluating the bid and is planning to appoint the project sponsor in January 2022.

SAEP also facilitated consultations between the Malawian government and Mott MacDonald, the consultant tasked with revising the Environmental and Social Impact Assessment, the Biodiversity Action Plan and the RAP. The consultations enabled the parties to address procurement complexities that had put Mott MacDonald's work on hold. The successful conclusion of these elements is another essential step towards attaining FC.

Figure 8: The September 2021 bid evaluation in Malawi. Photo Credit: USAID SAEP

Malawi's Generation Utility Improves COVID-19 and Disaster Recovery Planning

To help mitigate the negative impact of the COVID-19 pandemic on Malawi's generation utility, EGENCO, SAEP collaborated with the utility to improve its response capacity during and after disasters by developing business continuity plans. EGENCO needed to develop a risk management process and set up emergency task teams to deal with the pandemic and future disasters that could affect the utility's financial situation. Based on SAEP's advisory model to promote sustainable and collaborative capacity building, SAEP placed the responsibility of developing a business continuity system with EGENCO's risk management team.

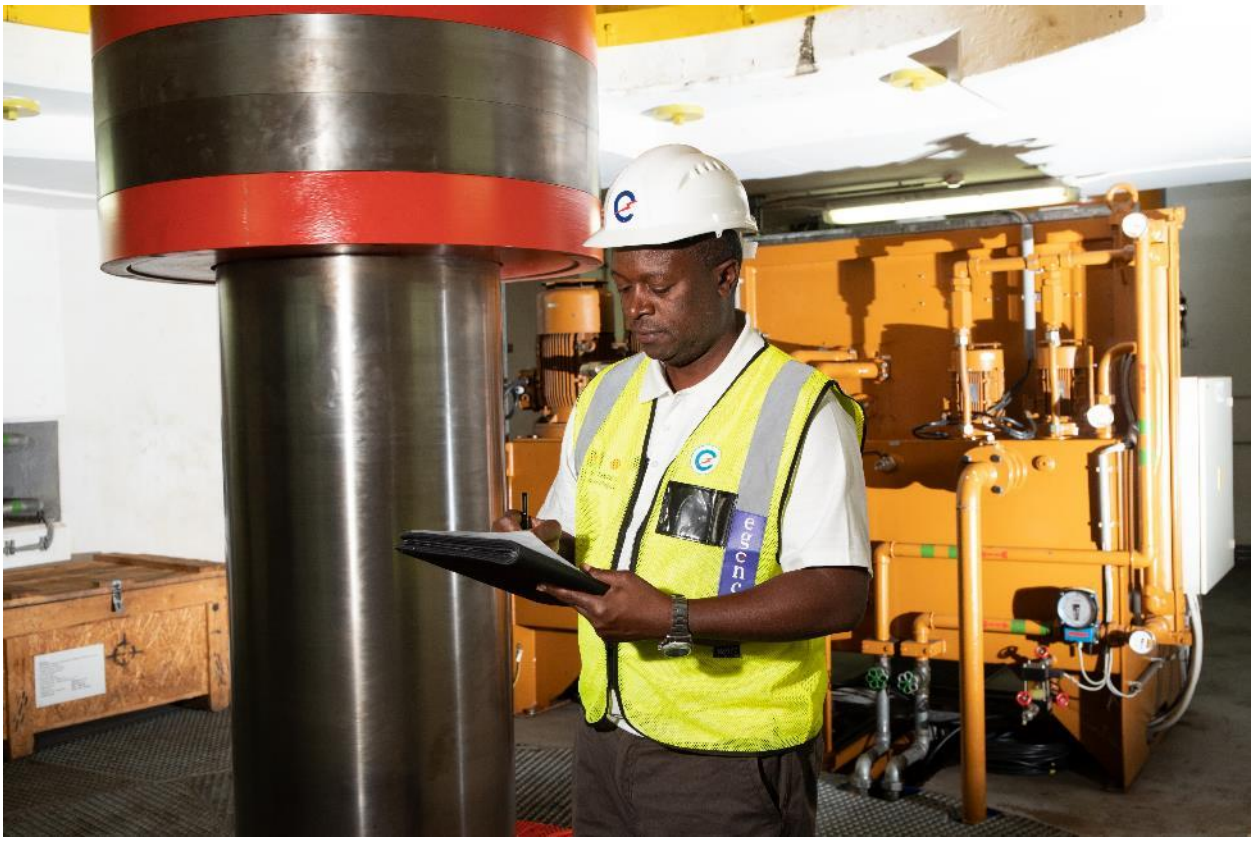


Figure 9: EGENCO has embraced SAEP's business continuity assistance. Photo Credit: USAID SAEP

After the initial onboarding and workshops to introduce the key concepts, EGENCO assigned staff members to lead the development of the content and incorporate EGENCO staff's knowledge of the business into the design of a business continuity management (BCM) system.

SAEP and EGENCO firstly focused on developing the BCM policy document and assigning roles and responsibilities to reduce the impact of disasters effectively. SAEP then issued a guide for designing and implementing the BCM system document to EGENCO. EGENCO's risk management team, with SAEP's support, presented the results to the EGENCO executives, who acknowledged the positive outcomes of forward-looking planning in dealing with existing and potential future disasters. SAEP further supported EGENCO to develop documents to support practical implementation of the BCM system and to address the provisions from the approved BCM policy and the BCM system. This resulted in the BCM Plan and the Business Contingency Plan for COVID-19, specifically, which incorporate EGENCO procedures and plans developed at the initial stages of the COVID-19 pandemic.

> *"I would like to express my profound gratitude to SAEP for the support rendered to us in building capacity to improve disaster preparedness and crisis response in EGENCO. SAEP has successfully delivered to EGENCO a comprehensive Business Continuity Management System that encompasses the Policy and Plans, Business Contingency Plan, Risk Database as well as workshops for Executive Management and the Board of Directors. The business continuity system closed the gap in our Enterprise Risk Management Framework. The intervention was timely considering the effects that COVID-19 has had on businesses worldwide."*
> William Liabunya, Chief Executive Officer, EGENCO

EGENCO has incorporated all of the SAEP-developed BCM documents and the risk database tool that integrates specific risk information and organizes BCM system information into a logical online storage

structure. Subsequent to the completion of SAEP's assistance, the EGENCO BoD approved the establishment and budget for a Business Continuity Control Centre, a critical aspect of the continuity planning process. The EGENCO Risk Management team also facilitated an awareness session on risk management for EGENCO staff.
For more details, refer to the success story section in Appendix A.

SHS Kick-Starter Grantee Lights Up 100,000 Households

Yellow, a grantee under the SHS Kick-Starter Program for Malawi, reached a milestone of connecting 100,000 households to electricity.

To accelerate access to electricity in Malawi, SAEP launched the SHS Kick-Starter Program in July 2019 and awarded a total of USD $2 million in results-based grant funding to four SHS companies. Under the program, SAEP provides grant funding to the companies in installments based on quarterly sales performance against targets. In addition to grant funding, the SAEP provided companies with streamlined access to operational support, including training on project management, sales force effectiveness and agent recruitment and retention.

Yellow has been operating in Malawi since 2018, selling affordable solar powered systems to low-income customers. Many of Yellow's customers used candles and battery torches for light before purchasing a SHS.

With the support of the grant, Yellow has:

- Scaled rapidly, hiring around 700 sales agents
- Increased sales volumes while maintaining a high-quality credit portfolio
- Opened a new sales office in Northern Malawi

> *"Power Africa's grant has enabled our scaling in Malawi. The cash injection was almost exclusively invested back into faster procurement; enabling a more rapid rollout than we could have ever hoped for without the grant. We now have a track record which clearly demonstrates our capability. This is priceless in creating a sustainable long-term business in this industry as we look ahead to future capital raise rounds."* Mike Heyink, Yellow CEO

The SHS Kick-Starter was catalytic in enabling this growth. Because Yellow strategically used the grant funding to raise further capital, the end of the grant funding will not stop the growth trajectory of the business, which is well-positioned for success in the market. As this demonstrates, the SHS Kick-Starter Program will continue to have life-changing impacts beyond the grant period by improving the living standards of rural households and enabling income-generating activities for communities across Malawi.
For more details on Yellow's journey, refer to the success story section in Appendix A.

2.6.2 ADDITIONAL HIGHLIGHTS FOR MALAWI

In Year 4, SAEP engaged in the following additional activities:

- SAEP provided technical assistance to ESCOM to anticipate and address concerns about potential adverse impacts of integrating significant levels of variable renewable energy generation. SAEP conducted grid integration studies of a 60-MW solar PV plant at the Salima substation of the ESCOM grid. The studies were conducted with full participation of a team of system planners and operators. In addition to conducting the JCM plant studies, SAEP delivered training to empower ESCOM staff to independently conduct such studies using DigSilent software as the need arises in the future. In its report on the studies, SAEP included recommendations for increasing grid resilience to faults. The report gives a basis for a review of ESCOM's planning and operating procedures to take account of rising levels of vRE generation, currently capped at 260 MW. The

planned commissioning of the first solar project in Malawi is January 2022. ESCOM's ability to diversify generation in this way will increase security of supply by reducing the near-total dependency on hydro power derived from a single river basin, the Shire. Over the years, frequent droughts and perennial river silting have prevented Malawi from using the full installed capacity of the hydro power plants. For a country with has one of the lowest access rates in the region, and one that aspires for increased industrialization, the generation capacity shortfall is a major constraint.

Malawi has historically resorted to emergency diesel-fuelled power plants to address acute capacity shortfalls. This is not only costly to the treasury but is also harmful to the environment. Increasing the contribution of vRE based on abundant renewable resources will reduce the need for emergency diesel power plants. Following the commissioning of the JCM plant, SAEP and ESCOM prepared plans for additional capacity building in Year 5 to further consolidate ESCOM's ability to undertake vRE integration studies. The training will include added emphasis on modelling battery storage and will extend the coverage to modelling of protective relays that enable the grid to limit the consequences of system faults.

- SAEP continued to support SHS Kick-Starter grantees as their operations ramped up following the slowdown caused by the COVID-19 pandemic. In June 2021, Yellow reached its goal to connect 100,000 households. As Yellow had leveraged the Kick-Starter grant to raise working capital, it is expected that the upward trajectory of the sales trend will continue even after the last disbursement from the Kick-Starter. SAEP decided to extend the Kick-Starter grant period to all four grantees, Yellow, Zuwa Energy, SolarWorks!, and VITALITE, from June to December 2021 as a result of COVID-19. SAEP produced a three-and-a-half-minute video about Power Africa interventions in Malawi highlighting the impact the work has had on SHS companies and customers. The Malawi off-grid video[10] went live on Power Africa's YouTube channel on 19 February 2021. The video included interviews with officials of Kick-Starter awardees at their respective premises. Also included is an SHS customer who describes the impact of acquiring a SHS on her life and well-being of her family. With continuing operational support from SAEP, VITALITE and Zuwa also trained sales agents in SFE this year. SAEP packaged the SFE and project management training offerings into the Off-Grid Company Tra ining Package, which includes three sets of SFE training materials – SFE training for managers, SFE train-the-trainer, and SFE training for agents – and the project management training module. With these materials, companies can equip sales agents and supervisors with enhanced sales force capabilities and thereby boost connections. In Year 4, SAEP-supported companies connected 99,202 customers. *For more details on the Kick-Starter, refer to the success story section in Appendix A.*

"I am happy I gave my mother this gift as it has helped her to earn more income from her business. This has also lessened my burden of sending money to my mother to buy candles or kerosene. I am happy that VITALITE offers flexible payment plans for products because I can pay in installments." – Emily Rose Mandala, VITALITE customer

[10] Watch the Malawi off-grid video here: https://youtu.be/CSZaWFYNUTE

- Power Market Ltd (PML), the licensed single buyer in the restructured Malawian power sector, was officially recognized and approved by the Malawi Energy Regulatory Authority (MERA) in December 2020. The single buyer has a license to buy generated electricity from within and outside of Malawi, sell to distributors and large customers within Malawi, and export outside of Malawi. The process of the transfer of the single buyer function from ESCOM to PML has commenced while ESCOM remains the system market operator. There is currently limited staff within PML as hiring will only start once the Ministry of Energy provides more clarity to PML regarding some issues related to the labor unions. SAEP began supporting PML in Year 4 and the support will extend into Year 5. The support is for in two fundamental areas that underpin the single buyer function: resource and operational planning. The objective of the resource planning support activity is to assist PML to establish procedures that enable it to produce year-ahead plans consistent with both the Malawi IRP and the system market operator operational plans. The resource planning will also guide PML's procurement planning activities. From an operational perspective the Malawi grid code and market rules prescribe the role, operational parameters, specific responsibilities, and tasks of the single buyer. While they establish prescriptive obligations, they do not set out the detailed procedures the single buyer must follow to meet those obligations. SAEP supported PML with developing an operational plan that sets forth those detailed procedures, enabling PML to fulfill the single buyer's obligations for grid access and transparent transactions in line with leading international practice. In this regard, SAEP developed a key component of the operational plan referred to as the compliance register, which establishes the complete set of obligations of the Malawi single buyer. The register also provides process diagrams for key areas related to the single buyer.
  These clearly show what activities and decisions are required to achieve the desired and required results for specific compliance. These will underpin the effective and successful operation of PML as the single buyer.

- To increase access to reliable and affordable energy supply, SAEP is strengthening the capacity of ESCOM to operate in an interconnected system and maintain the associated electricity infrastructure in support of the 1,000 MW Mozambique–Malawi regional interconnection project. However, due to COVID-19 travel restrictions and lockdowns, the site visits could not take place in Year 4. The project, Malawi's first interconnection to the SAPP, reached FC in July 2020 and is expected to be commissioned in 2023. The interconnector will enable Malawi to participate in cross-border trade of electricity. Since FC and in Year 4, ESCOM has made good advances in procuring the OE and EPC contractor, which are both in their final stages of competition. The OE consultant is expected to start in January 2022 and construction is projected to take between 18 months to two years. SAEP has been providing support to the ESCOM Control Centre engineers to prepare them to operate in an interconnected system once the 400-kV Malawi–Mozambique interconnector comes online. The Program completed Phase 1 of a two-phase training activity for ESCOM's Control Centre engineers in October 2020. Phase 2 of SAEP's training activity entails site visits for the ESCOM engineers (who attended the October 2020 training) to the National Control Centers of two operating member countries and the SAPP Coordination Centre Head Office. ESCOM will continue to explore the possibility of the activity being completed in Year 5

2.7 Mozambique

Mozambique has high power generation potential that could be harnessed from various sources, including water, coal, natural gas, wind and solar. Despite this great potential, power distribution in the country is severely underdeveloped with a current electrification rate of 29% and only 6% in rural areas. Mozambique aims to electrify all households by 2030 and has placed a priority on rural electrification through both on- and off-grid solutions.

BY THE NUMBERS

708 MW
Pending Financial Close

306,488
Actual Connections

670,933
Projected Connections

In response to Mozambique's ambitious and aggressive electrification targets, SAEP is working with the national utility, EDM, to complement its electrification initiatives with the establishment of an Electrification Management Unit (EMU) and implementation of a Human-Centered Design (HCD) approach to improve customer centricity and increase connections. SAEP is also focusing efforts on the off-grid sector. In addition, SAEP provided assistance through an embedded advisor to the Temane Transmission Project (TTP) that reached FC in December 2020.

2.7.1 TOP ACHIEVEMENTS AT A GLANCE

Mozambique's Temane Transmission Project Begins Construction

In December 2020, all sources of funding for the TTP became available and thus the project officially reached FC, giving the green light to begin building the project. The 563 km high-voltage transmission line will link the country's northern and southern power systems to boost energy security and economic development. Since FC, the TTP has made great progress. This includes the conclusion of factory acceptance tests, tower type tests, and the arrival of construction material shipments such as transmission line conductors. In addition, all six construction Lots and contracts signed with the EPC contractors for the commencement of construction became effective in August 2021.

Figure 10: TTP material on route to construction sites from the Maputo harbor. Photo credit: USAID SAEP

SAEP provided support for the project's evolving organizational and technical needs through an embedded advisor within EDM from January 2018 to December 2020. At crucial turning points, and throughout the unprecedented COVID-19 pandemic, the SAEP advisor guided and facilitated

engagements between the funders and EDM to finalize the project financing plan and prepare the operational team to meet TTP's complex operational requirements. On 1 June 2021, the Government of Mozambique officially launched the TTP.[11] The President of Mozambique, Filipe Nyusi, commended and acknowledged the role SAEP played in helping to advance the project. Construction of the TTP is estimated to cost USD $1 billion and upon completion, the project will improve security of supply for the entire southern part of Mozambique and create 3,000 jobs of which 200 will be permanent once TTP is operational.

The development of the TTP will facilitate a sustainable and renewable electricity supply and increase the reliability of available energy. In addition to increasing Mozambique's generation capacity and energizing its social and economic transformation, this project is also of great importance to the Southern African region. A key component of Mozambique's 2015–2024 National Energy Strategy is the development of a transmission system to connect Mozambique's northern, central, and southern power grids and strengthen regional connectivity to the SAPP. The TTP forms part of this transmission system, the Mozambique Integrated Transmission Backbone System (STE Project), making it essential to the social and economic transformation underway in Mozambique and Southern Africa. Increased access to affordable and reliable energy supply across Southern Africa requires greater cooperation across borders to ensure power can move freely and securely. With efficient transmission systems in place, greater volumes of electricity can be traded at reduced costs to governments and consumers.

An official stone placing ceremony by the President of Mozambique, Filipe Nyusi, is tentatively planned for January 2022. SAEP continues to monitor progress on the construction of the 400 kV transmission line to be completed by 2023.
For more details on support to the TTP, refer to the success story section in Appendix A.

Improving EDM's Customer Relationship Management and Increasing Connections

SAEP cooperated with EDM to design, set up and operationalize an Electrification Management Unit (EMU) through technical advisory and on-the-job training. The EMU uses leading project management techniques to coordinate on-grid electrification and distribution network expansion across various departments. SAEP is also assisting EDM to improve its customer engagement and management services to incorporate a customer management function in the EMU. In Year 3, SAEP assisted EDM to realign its customer engagements through the innovative HCD process, which builds on understanding customer experiences and developing aligned solutions and strategies for the utility.

In Year 4, SAEP piloted the three solutions developed in Year 3: i) a community engagement operating model, ii) a customer servicing model for electrification, and iii) scheduling of communities' electrification and connections. EDM selected two customer service areas to conduct the pilots – Machava and Macia. They are both in the south of Mozambique but cover two different realities: peri-urban and rural. The solutions require three manager positions to be filled: the Energy for all Manager, Community Engagement Manager and the Client Service Manager. EDM identified people from the two delegations – regional EDM technical and commercial centers in Mozambique – to take on these positions. They subsequently went through a two-month training program with the project team to help get them prepared for rollout while simultaneously testing the efficiency and efficacy of the proposed solutions. Three main pillars were tested in the scope of this pilot. The first one is the organizational pillar, which entails assessing the different managerial tools at the disposal of the new managers and what is necessary to implement them within the specific customer service area and EDM as a whole.

[11] Read the press article here: https://www.businesslive.co.za/bd/world/africa/2021-05-31-mozambique-launches-build-of-new-1bn-power-projects/

The process pillar focuses on the work routines that will need to be adopted and followed by the new managers across the EDM organization. Finally, the systems pillar centers on the systems supporting the work to be executed by the new managers for organizing and monitoring project activities. The pilot was successful and SAEP will present the pilot results to the BoD in quarter 1 of Year 5 to seek authorization for broader roll out.

After BoD authorization is obtained, EDM will roll out the pilots that were tested in the regional distribution delegations and develop and conduct surveys with appointed managers to assess alignment with the tested procedures for successful implementation. Lastly, SAEP will assist EDM in integrating these processes within the EMU, thereby completing the EMU design and functionality.
For more details on support to EDM and on-grid connections, refer to the success story section in Appendix A.

Fiscal Exemptions to Improve the Affordability of SHSs and Increase Electricity Access

Figure 11: SAEP supports to SHS companies aims to improve SHS affordability for customers. Photo Credit: USAID SAEP

SAEP, in collaboration with BRILHO Energy Mozambique (funded by UK-aid), produced an econometric study on fiscal exemptions. The study will help the Government of Mozambique to make informed decisions on introducing a fiscal incentives policy in the form of VAT and import duties exemption for imported solar products to improve the affordability of SHSs and increase electricity access.
The report's findings show that with the implementation of fiscal incentives and an increase in available grants for SHS, the Mozambican government could reach 12.6 million people and close the remaining access gap required for their ambitious target of universal access by 2030.

At the close of the year, SAEP was ready to present the econometric study to the Ministry of Mineral Resources and Energy (MIREME) and Ministry of Finance to support the implementation of these reforms. In fact, SAEP's continuous engagement with MIREME, ARENE and FUNAE, working closely with USAID/Mozambique and other donor partners, has facilitated a high level of engagement and advancement of key policy reforms for VAT and import duty in the Mozambican market.

This work is an operationalization of the key findings of SAEP's Year 3 Consumer Affordability Survey that showed significant potential for electrification through SHS by lowering the purchase price of SHS units through the implementation of fiscal exemptions.

SAEP will continue to work with stakeholders in Mozambique, including SHS companies and the government, to enable authorities to use the updated econometric study to effect policy change – particularly, the application of fiscal exemption to improve SHS affordability.

2.7.2 ADDITIONAL HIGHLIGHTS FOR MOZAMBIQUE

In Year 4, SAEP engaged in the following additional activities:

- SAEP is supporting EDM's newly formed Revenue and Losses Control Directorate with developing tools and capacity building. The overall goal of this assistance is to help EDM reduce commercial losses and improve commercial viability. The Directorate must reduce commercial losses by 2% per year from the current 27% to 20% by 2026. The key focus of the overall activity is training the analytics team within the Revenue Protection Directorate and developing procedures and tools required to measure and report commercial losses accurately. The underlying philosophy is that EDM will not be able to assess its commercial loss reduction plans and take corrective measures where needed without accurate information and metrics. EDM Director for Distribution, Electrification and IT, Francisco Inroga, is the key driver of this activity and sees SAEP's support as critical to achieving the commercial loss reductions targets. By the end of Year 4, SEAP had completed the analytics tool based on in-depth meetings with EDM and incorporating leading international leading practice. SAEP will continue to support EDM with their loss reduction program in Year 5.

  > *"We are pleased to inform you* [SAEP] *that we have chosen to adopt the loss calculation tool as an integral part of our processes. Additionally, the tool has been presented to the board, the rest of the EDM organization and to other partners that EDM works with in reducing losses, and I am pleased to indicate that the work has been well received, and significant expectations have been created on what it can assist EDM to achieve going forward."* Francisco Inroga, EDM Director for Distribution, Electrification and IT

- In response to the impact of COVID-19 on utilities, SAEP worked with EDM's COVID-19 Task Force to review and improve the utility's emergency response and business continuity plans. This assistance addressed not only alleviation of the immediate COVID-19 impact, but also serve as a basis for future response capabilities to unknown challenges by developing and establishing comprehensive continuity plans. SAEP assisted EDM in developing a robust planning process and financial model to mitigate the impact of COVID-19 on its operations and business performance. A key component was developing a cash flow model that contains a forecast of EDM's financial availability (revenue generation in the coming periods vs. expenses). The model provides the option to change key variables to assess the impact on cash flows for each scenario.

  SAEP and EDM collaboratively developed a business continuity report that contains the model and management process of the EDM business continuity plan and presents the main risks associated with the COVID-19 pandemic for EDM's critical areas. Further, the report contains the contingency measures and the consequent action plan to facilitate the continuity of EDM's business. SAEP presented the results to EDM's BoD on 23 February 2021. The Board was fully engaged during the meeting and affirmed its understanding of the process and tools. EDM has embraced the processes, implemented the business continuity plan and is managing the mapped risks through the EDM task teams established by SAEP. EDM has also been using the COVID-19 Daily Bulletin, which was an important tool to keep employees informed about the impact of the pandemic on EDM.

- In Year 4, SAEP made progress in working with Mozambique's Energy Regulatory Authority, *Autoridade Reguladora de Energia* (ARENE), to, firstly, develop a work plan of activities for enhancing the regulator's institutional capacity and secondly commencing with the implementation thereof. The activities focused on developing guidelines to assist the regulator in evaluating power purchase agreements (PPAs) and drafting high-level guidelines for evaluating energy infrastructure investments.

This first activity entails the development of a manual and a checklist(s) that ARENE can use to evaluate PPAs between renewable energy IPPs and EDM. By the end of Year 4, SAEP had completed a first draft version of the manual and is continuing to refine, but the activity will carry over into Year 5 to incorporate ARENE feedback. Once completed, it will empower ARENE to properly evaluate PPAs and it is expected to have a positive long-term effect on the promotion of IPPs in the country.

- SAEP concluded assistance to the Beyond the Grid Fund Africa (BGFA) with the evaluation of applications for the first round of their second call for applications covering Mozambique. This is the first of a two-round application process that the fund is running for Mozambique that will cover SHS and mini-grid companies. In addition to the evaluations that took up a significant amount of time, the SAEP off-grid advisor also participated in the post-selection discussions as an observer. The exact number of electrification connections that will result from the funding window will be determined at the end of the application and due diligence process when the awards to companies are concluded. This tender process should continue to move forward now that the Electricity Act that provides for private sector mini-grids has recently passed.

- SAEP is collaborating with an energy company based in Spain called *Alten Energias Renovables* (ALTEN) in assessing the viability of pairing battery storage with a 40 MWp solar PV plant in the north of Mozambique. The IPP is interested in pairing battery storage with its planned PV plant. The inclusion of battery storage could result in the company's assets playing a more significant role in supporting peak demand and ancillary services. By the end of the financial year, SAEP had completed a final draft model and was finalizing a summary report on the model's findings. The model and the report will go through internal and ALTEN reviews before finalization in quarter 1 of Year 5. The model will enable ALTEN to have informed discussions with EDM about the viability of adding batteries to their plant.

2.8 Namibia

Namibia's national electrification rate stands at 54 percent. Namibia has a low population density, at roughly three people per square kilometer, which makes it challenging to extend services to the 74 percent of the rural population who do not have access. In addition, Namibia currently imports up to 65 percent of its electricity from surrounding countries. To reduce imports, Namibia's energy sector is taking several steps to increase its domestic energy generation.

BY THE NUMBERS

15 MW
Pending Financial Close

In Year 4, SAEP continued to support to the City of Windhoek (CoW) and assisted the Central Northern Regional Electricity Distributor of Namibia (CENORED) and Oshakati Premier Electric (OPE) to review their bidding documents for the procurement of alternative clean energy sources from IPPs.

2.8.1 TOP ACHIEVEMENTS AT A GLANCE

CENORED Issues EOI and Prequalification for Alternative Energy Sources Including Battery Storage

On 7 May 2021, CENORED released an EOI for the supply from alternative energy sources. This EOI is a product of transaction support that SAEP has been providing to CENORED. In line with the introduction of the Modified Single Buyer that allows NamPower customers to procure up to 30% of the annual energy needs from a private supplier, CENORED issued a request for bids for electricity from solar PV plants with a capacity of up to 10 MWac for a period of up to 25 years. The EOI specified plants with combined solar PV and battery energy storage systems (BESS) or that start off with solar PV only but with a plan to integrate BESS post-commissioning. The Electricity Control Board (ECB) rejected the tariffs for the previous procurement of electricity from up to six solar PV plants for being too high and thus CENORED is re-running a procurement process. The current two-part procurement process intends to get bids at a tariff that will be acceptable to the ECB.

In deciding on the technical specifications for the plants from which the energy will be sourced, CENORED also relied on outputs from the assistance SAEP provided around integrating BESS into their network to reduce electricity purchasing costs. That work had identified two preferred network segments for supply from a solar PV and BESS installation; one within CENORED's exclusively managed territory and another jointly managed network. For this initial EOI, CENORED decided to test the market interest in supplying energy from the specified technologies (including BESS) to any areas within their exclusive jurisdiction. In total, CENORED received 23 bids in response to the EOI. By the end of the financial year, the bid evaluation was completed and ready for CENORED's Executive Committee and Board review.

CENORED will use the market response to the EOI to inform another EOI to be issued in quarter one of Year 5. This next EOI will be for the supply of energy from solar PV and BESS to one of the preferred networks, as identified by SAEP's BESS work.

2.8.2 ADDITIONAL HIGHLIGHTS FOR NAMIBIA

In Year 4, SAEP engaged in the following additional activities:

- During a City of Windhoek (CoW) municipal council meeting held on 12 August 2021, the council reviewed and approved the city's five-year electrification plan. The approval includes the 2021/2022 electrification project plans to provide electricity to 1,500 households and for the CoW to approach financial institutions for financing of electrification of the remaining informal settlements. SAEP assisted the city in developing an approach to accelerate the rate of electrification of households in the peri-urban settlements by researching and presenting options of business models with private sector participation and a financial model to show the viability of each of the models. SAEP also supported the CoW to navigate the structuring of an appropriate public-private partnership for the peri-urban activity, identifying financial institutions and developing a strategy for engaging them. With the council's approval, the city can now move ahead with its electrification financing plans. At the end of the year, SAEP was working with the CoW's Electricity Department on the next steps. SAEP also facilitated discussions between the AfDB and the CoW as the AfDB had expressed an interest in funding the City's peri-urban electrification.

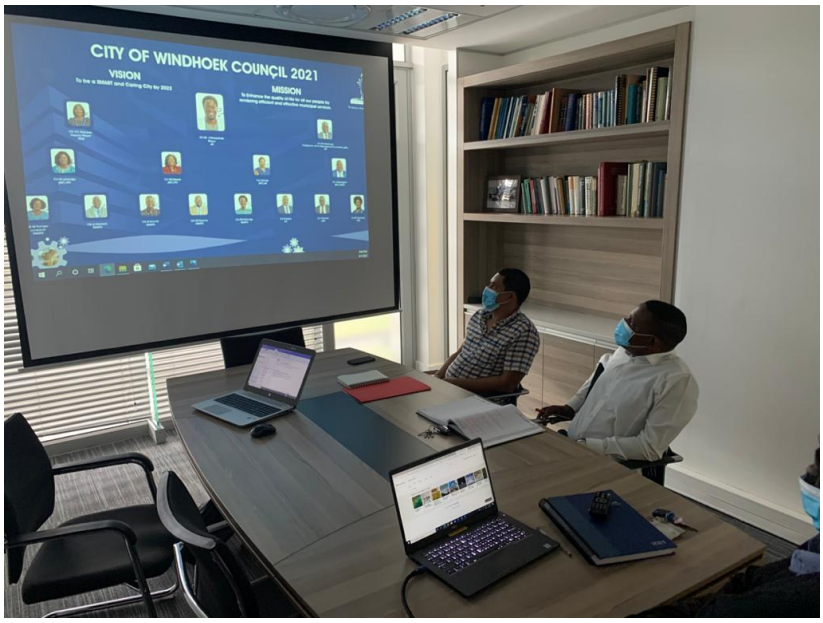


Figure 12: A CoW meeting on the electrification of peri-urban settlement sin March 2021. Photo Credit: USAID SAEP

- Oshakati Premier Electric (OPE), an electricity distributor in Namibia, intends to embed a new 5 MW solar PV plant in its network and anticipates reaching FC by 31 December 2021. OPE sought assistance from SAEP with tasks leading up to the release of an EOI for funding of its solar PV plant. SAEP provided guidance to OPE developing the procurement approach and documents. OPE issued the EOI on 22 July 2021 and received 11 bids. By the end of the financial year, the evaluations had been completed and an evaluation report drafted. SAEP will continue to provide technical assistance to OPE as they advance the solar procurement and develop the project.

2.9 South Africa

South Africa has favorable conditions for solar and wind power generation, but these sources currently only contribute about 3% of energy supplied to the national grid. The IRP 2019 is the Government of South Africa's plan to solve the country's power crisis by generating electricity through a mix of sources, with renewable energy accounting for a large portion of it. Following the 2019 IRP and to address the current electricity crisis, the Department of Mineral Resources and Energy (DMRE) this year released two tenders, the Risk Mitigation Independent Power Producer Procurement Programme (RMIPPPP)[12] on 23 August 2020, and the REIPPPP Bid Window 5. Large portions of the procurement of renewable energy are done at the central level through the DMRE, but with the passing of new legislation, municipalities can now also look at developing generation projects. SAEP is focusing its attention in South Africa to provide technical assistance to the municipalities on advancing renewable energy projects and expanding access to electricity.

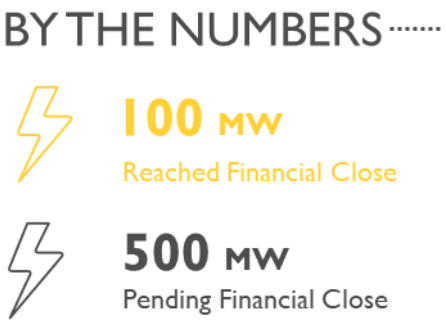


Figure 13: The 500 MW includes SAEP's pipeline of projects and not the full pipeline of transactions in South Africa moving forward through RMIPPPP and REIPPP.

In Year 4, SAEP kicked off support to the South African Local Government Association's (SALGA) providing capacity building on critical topics through facilitated workshops, dialogues and training sessions with selected municipalities. SAEP's support will improve municipalities' abilities to manage customer connections, advance renewable energy projects and enhance the skills of the energy professionals within these municipalities.

2.9.1 TOP ACHIEVEMENTS FOR SOUTH AFRICA

Supporting Municipalities to Increase Energy Access and Deployment of Renewable Energy Projects

SAEP began working with SALGA to support municipalities with capacity building on new smart energy technologies, power project financing and revenue management. SALGA is the autonomous association for all 257 South African municipalities and serves as a strategic advisor representing the interests of local government. SALGA has a collective commitment towards clean energy in South Africa.

SAEP and SALGA signed a letter of collaboration on 13 May 2021. As part of the collaboration, the parties agreed on several activities, including supporting municipalities with capacity building in the following areas: Project Finance for Power Projects, Revenue Management and Non-Technical Losses, PPPs for New Generation Projects, Electrification Project Management Office, Battery Energy Storage Systems, and Off-grid Electrification.

[12] The RMIPPPP is technology agnostic, requires dispatchable generation that can operate from 5h00 to 21h30 and must be able to connect to the grid by June 2022. A total of eight projects have been awarded with two others being considered. The majority of power is going to Karpowership at 1,220 MWs while the others were awarded to solar, wind and battery technology projects. ACWA Power, a Power Africa partner, was also awarded a 150 MW solar PV, wind, battery and diesel combined project. SAEP is not providing assistance to this program, but will look for opportunities to support the developers selected

By the end of Year 4, SAEP completed the Power Project Finance training consisting of six sessions for municipal officials. A total of 125 officials representing 47 municipalities attended and participated in lively discussions. The focus of the support is to enable municipalities to adopt project finance principles and approaches in their drive to develop new electricity infrastructure.
There was good interest in the training, with a consistent number of participants attending every session. During the final session, municipalities could share a pipeline of power projects that SAEP will consider for additional support in Year 5.

Feedback from participants of the power project finance training

Very good information received which will add value to projects within the municipality. Thank you. Dr. Dhanesh Raspersad, Director: Planning, Customer Services and Fleet, Kwa Dukuza Municipality

Thank you for the course shared. Relevant for those embarking on the energy efficiency and renewable energy implementation. Esther Mkhwebane, Technical Advisor, Carbon Trust

SAEP also commenced training on Revenue Management to improve knowledge and provide practical information to municipalities focusing on i) the effective management of non-technical losses, ii) creating new revenue streams considering increases in grid defection due to renewable driven off-grid power generation, and iii) enhancing customer revenue collection.

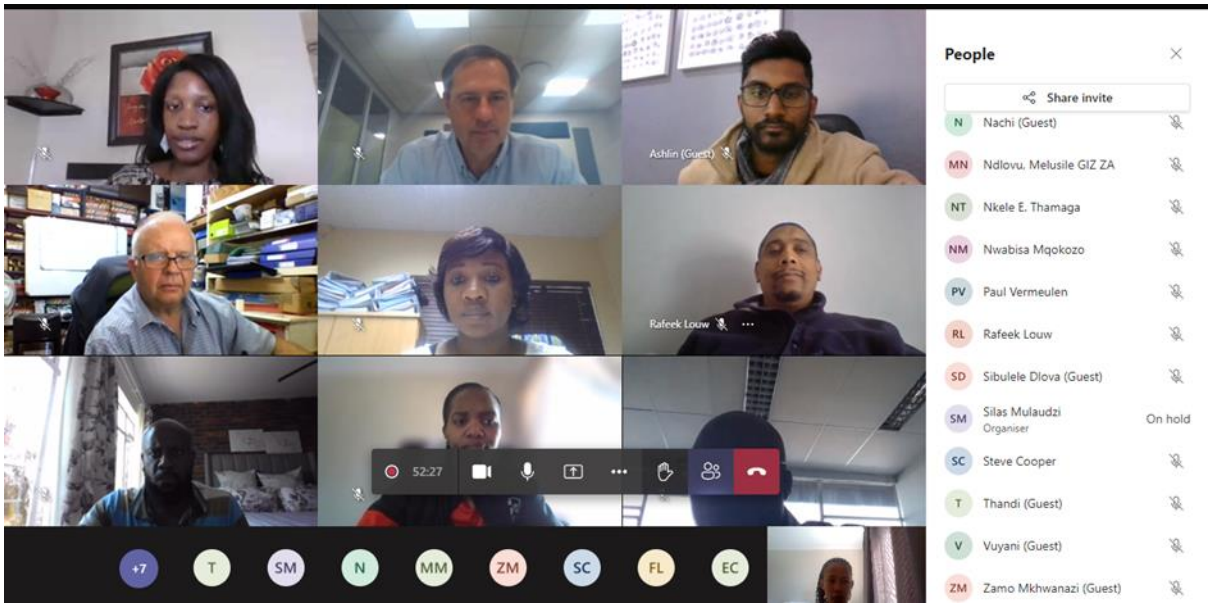


Figure 14: The power project finance training session were conducted virtually. Phot Credit: USAID SAEP

The first four revenue management sessions took place on 22 and 28 September 2021, where a high number of participants – 137 representing 26 municipalities – attended. The training was interactive and allowed participants to apply their learnings and share experiences by working on case studies in small breakout groups and then reporting back to the broader group of participants.

Capacity building on PPPs for New Generation Projects, Electrification Project Management Office, Battery Energy Storage Systems and Off-grid Electrification will take place in Year 5.

"SALGA appreciates and acknowledges the collaboration we have with SAEP who is providing technical assistance to aid SALGA's efforts to support municipalities in managing existing energy infrastructure, increasing electricity access and introducing novel energy solutions. Since the collaboration began, we have successfully hosted the Project Finance training with over 25 municipal employees participating. Moreover, we look forward to implementing the other areas of collaboration including the Revenue Management, Electrification PMO and PPP training sessions this year. The training is benefitting municipalities significantly as they will be equipped with the knowledge and expertise to engage meaningfully with the IPPs or investors regarding the establishment of renewable or cleaner energy solutions. These training sessions will impart skills to municipal employees and it is envisaged that staff members will play a significant role in ensuring that municipalities improve revenue management and collection, management and reduction of non-technical losses as well as improved cash flow management and credit and debt management. We look forward to a continued relationship with SAEP." – Dr. Silas Mulaudzi, SALGA Sustainability Energy Specialist

2.9.2 ADDITIONAL HIGHLIGHTS FOR SOUTH AFRICA

In Year 4, SAEP engaged in the following additional activities:

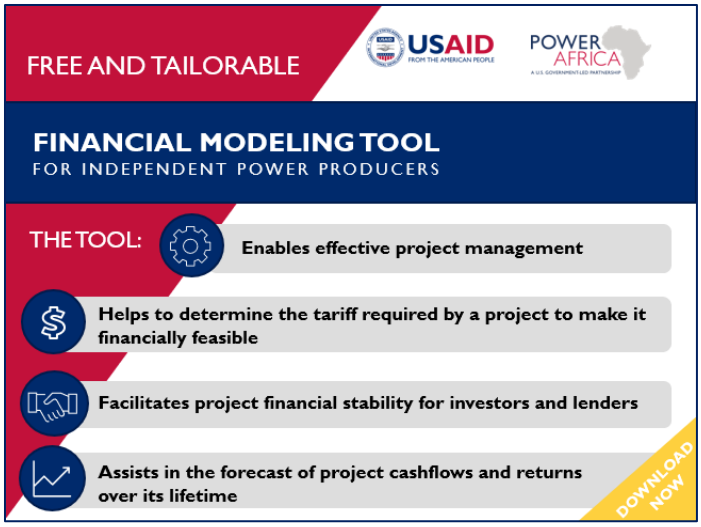
- SAEP is supporting the City of Cape Town (CoCT) in its development of solar projects. Given the ministerial determination that will potentially allow qualifying municipalities to purchase electricity directly from IPPs, the CoCT wants to move forward with securing supply from IPPs. The previous LOC signed in January 2019 covered four tasks. In May 2021, after discussions with the CoCT, SAEP provided an addendum to the LOC and added four additional areas of support over the next five months:
    - A high level prefeasibility of a 60 MWac solar PV facility at the Paardevlei site, Somerset-West
    - Risk and commercial review of the draft final PPA
    - Tariff design for the IPP program
    - Financial modelling input to the 10 MW Atlantis solar feasibility study

  Building on the financial model that was developed for IPPs more broadly, SAEP progressed well with the development, preparation and population of the 60 MWac Paardevlei financial model(s). SAEP will share the model with the CoCT once the project officially commences, subject to city's final approval of the Letter of Collaboration.

- SAEP developed a base financial model for SunElex, a South African owned IPP, to use in its preparation of a bid under REIPPPP Bid Window 5. The DMRE released the RFP on 12 April 2021 and SAEP updated the model as per the RFP requirements. This model incorporates all changes listed in the RFP as well as links to the export sheets provided by the RFP. SunElex unfortunately failed to provide a bid submission in response to Bid Window 5 and have indicated that they have plans to submit the project under Bid Window 6.

- Building on the model that was developed for SunElex, SAEP developed a generic financial model for interested IPPs who will be able to adapt the model for their own use. Additionally, SAEP created a user guide and training material for the model and plans to conduct a live webinar training on the

use of the model. USAID has approved the model and public release material, which SAEP plans to publish through Power Africa's social media channels in quarter 1 of Year 5. The tool is designed to help users i) tailor their project based on a set of economic and operational assumptions, ii) forecast the project's returns over its lifetime, iii) determine the tariff required by a project to make it financially feasible, and iv) provide a detailed analysis to investors and lenders of the project's financial viability.



- SAEP previously provided technical assistance to the IPP Office for Round 3 of the REIPPPP, during which the 100 MW Redstone Concentrated Solar Power (CSP) thermal power project was awarded preferred bidder status by the DMRE. ACWA Power, the Saudi developer, investor and operator of power generation and water desalination plants announced the commencement of construction on the Redstone project following achievement of FC at end June 2021. At USD $162.457 million total investment, the Redstone project is the largest renewable energy investment in South Africa to date. The project is located in the Northern Cape Province. The plant will be equipped with a 12-hour thermal storage system. Commencement of operations is scheduled for quarter 4 of 2023.

Figure 15: PV panels at the Aggenys solar plant in the Northern Cape. South Africa plans to solve the country's power crisis by generating electricity through a mix of sources, with renewable energy accounting for a large portion of it. Photo Credit: USAID SAEP

2.10 Zambia

Zambia has 2,800 MW of installed electricity generation capacity, of which 85% is hydro based. National access to electricity averages at 31% with 67% of the urban and 4% of the rural population having access to power. The Government of Zambia declared its commitment to universal electricity access for all Zambians by 2030. To achieve this goal, Zambia must increase its power generation capacity as well as develop a strategy to bring power to millions of unelectrified households.

In Year 4, SAEP continued with operational support to the off-grid sector and kicked off energy efficiency assistance to the Lusaka Water and Sewerage Company(LWSC). SAEP is also providing transaction advisory support to various renewable energy projects.

BY THE NUMBERS

280 MW
Pending Financial Close

92,828
Actual Connections

277,345
Projected Connections

2.10.1 TOP ACHIEVEMENTS AT A GLANCE

Zambia Operational Support to SHS and Mini-Grid Companies

Figure 16: SHS keep shops open after dark. Photo Credit: USAID SAEP

A notable activity during Year 4 was the strategic support engagement with ENGIE. Like many others, ENGIE was grappling with Zambia's volatile currency exchange regime. The unstable currency environment threatened to reduce the affordability of SHS and thus negatively impact their sales. SAEP developed strategic options based on scenarios of the short- to medium-term currency outlook. This helped the company to develop strategies for navigating the volatile currency outlook in Zambia. Furthermore, SAEP worked with ENGIE to prioritize its next steps based on the factors identified in the SAEP report as being the most important. Subsequently, SAEP generalized the analysis and the findings, producing a report that attracted high interest among other off-grid companies similarly affected by currency exchange fluctuations.

As in earlier years, SAEP continued to support measures for increasing the affordability of SHS among target communities.

In collaboration with the Africa Clean Energy Technical Assistance Facility (ACE-TAF) funded by the UK Foreign and Commonwealth Development Office (FCDO), SAEP supported legislative reform to expand the fiscal incentive framework for renewable energy products. In addition, in collaboration with ACE-TAF, SAEP supported the development of a Customs Handbook as a reference for the Zambia Revenue Authority and importers of renewable energy products, especially SHS and mini-grid companies. At year-end, the final draft of the Customs Handbook awaited the Government of Zambia's approval.

In Year 4, Zambia's off-grid sector contributed a cumulative total of 92,828 connections mainly from SHS companies. In addition to continued connections from our core technical assistance, future connections are expected from SAEP's support to the Beyond the Grid Fund Africa (BGFA) program. SAEP core staff evaluated applications for both rounds of BGFA's first call for proposals, which included Zambia. The connections will be counted when the SHS and mini-grid projects from the selected companies begin to be implemented.

2.10.2 ADDITIONAL HIGHLIGHTS FOR ZAMBIA

In Year 4, SAEP engaged in the following additional activities:

- SAEP concluded its assistance to ZESCO regarding the development of pricing methodologies for transmission and system operator services, which addressed cost allocation and wheeling charges. Based on the methodologies, SAEP developed a transmission pricing model that enables ZESCO to conduct various pricing calculations centered on different assumptions and data inputs. ZESCO is currently developing the commercial arrangements to implement its transmission pricing as part of a pilot project for open access with Africa GreenCo. In addition, ZESCO will use the model to prepare a formal submission to Zambia's Energy Regulatory Board (ERB) seeking approval for ZESCO's pricing regime. The approval by the ERB will contribute to strengthening ZESCO's financial position as it will allow full cost recovery for these services.

- SAEP provided technical assistance on energy efficiency to the LWSC. The LWSC had expressed a desire to build on recommendations of earlier energy efficiency audits conducted with the assistance of the World Bank and KfW. The SAEP scope of work (SOW) for this activity focused on identifying opportunities to reduce energy use and demand and on a cost-benefit analysis of installing solar PV plants at the three main pumping sites. High energy costs constrain the ability of LWSC to adequately serve the city of Lusaka with two million inhabitants. During Year 4, SAEP facilitated virtual working sessions focusing on i) a review of the previous audits, ii) designs and cost-benefit analysis for the solar PV power plants at the three pumping stations and iii) a review of the Energy Efficiency Policy and the implementation framework. At the close of the year, SAEP was compiling a completion report of the activities. It was clear that among several factors to be addressed will be the electricity tariff categorization and securing finance for the PV plants. During the implementation of this activity, SAEP compared notes with a European Union (EU) team also working with LWSC who expressed interest in SAEP's activities and will consider financing the solar PV plants. This is an important opportunity for LWSC to build the plants and rein in energy costs.

Figure 17: The LWSC Iolanda water treatment plant on the Kafue River supplies Lusaka with water. Photo Credit: USAID SAEP.

- SAEP continued to be involved with the EU Increased Access to Electricity and Renewable Energy Production (EU/IAEREP) Program's analysis and potential implementation of a "One-Stop Shop" (OSS) aimed at assisting potential IPP developers to bringing their projects to fruition in an expedited manner. SAEP engaged with and supported the OSS Working Group in scheduling a virtual country tour with South Africa and Rwanda. With SAEP support, the South African Department of Trade, Industry and Competition's InvestSA One-Stop Centre and Rwanda's Ministry of Foreign Cooperation Rwanda Development Board (RDB) agreed to take part in the virtual workshop and country tour. Both bodies will be available to present to and engage with the working group, providing insights into the inception, purpose and processes of the InvestSA and RDB programs. The continued impact of the COVID-19 pandemic and a change in government after the recent elections in Zambia have delayed this virtual event, initially planned for September 2021, to later in 2021, with a date still to be determined.

2.11 Regional

Increased access to affordable and reliable energy supply across Southern Africa requires greater cooperation across borders to ensure power can move freely and securely. With efficient systems in place, greater volumes of electricity can be traded at lower costs to governments and consumers. Strengthening institutional capacity remains a key focus in overcoming the challenges of the energy sector in Southern Africa. The Southern Africa regional institutions play a critical role in advancing the regional electricity agenda.

In Year 4, SAEP continued to develop knowledge products by compiling practical insights, case studies and topic-specific supporting documents in an easy-to-digest format for energy stakeholders across the region and beyond. A key objective of SAEP is to share the Program's work more broadly for greater impact. More detail on these activities as well as activities with the Southern African regional institutions, SADC, the SADC Centre for Renewable Energy and Energy Efficiency (SACREEE), SAPP and the Regional Energy Regulatory Association (RERA) follows below.

2.11.1 TOP ACHIEVEMENTS AT A GLANCE

Building Effective Electrification Programs: A Dialogue with SADC Senior Energy Officials

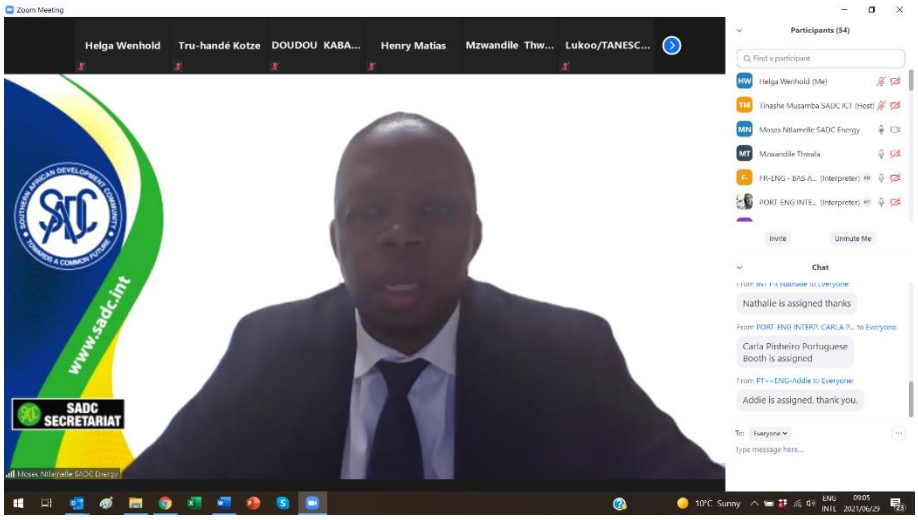


Figure 18: SADC Senior Program Officer for Energy, Mr. Moses Ntlamelle, moderating SAEP's workshop for SADC members on 29 June 2021

As part of SAEP's broader capacity building program with SADC, on 29 June 2021, SAEP successfully presented a workshop titled "Building Effective Electrification Programs: A Dialogue with SADC Senior Energy Officials." The focus of the session was the improvement of access to electricity in the SADC region. SAEP presented on i) the advantages of setting up an electrification coordination unit, ii) a case study from a successful South African electrification program and iii) the key enabling factors for electrification, specifically funding. The session was a success by all measures with around 70 participants from SADC ministries and regional institutions attending and participating in lively discussions on all three topics. On 2 July 2021, SADC Senior Program Officer for Energy, Moses Ntlamelle, expressed his gratitude in an email to SAEP in which he stated, "*On behalf of SADC management team, I would like to thank you and the SAEP team for successfully co-organizing and moderating a regional capacity building workshop on increasing access to electricity including the case studies presented.*"

Improving Regional Capacity for Demand Forecasting and Production Optimization

SAEP adapted the production optimization tool, initially developed for ESCOM in Malawi, into a generic model for SAPP member utilities to improve short- and medium-term demand forecasting and production optimization. This will help build utilities' planning capability towards enhancing regional harmonization and cross-border trade. In Year 4, SAEP developed a training plan and materials and facilitated training for a select group of planning engineers from the SAPP region in July and August 2021. The first training focused on an introduction to the model which included the methodology behind the design of the model. Training two covered the actual model implementation specific to the different countries. Overall feedback from the attendees was very positive, with all utilities expressing interest in utilizing the model.

The training sessions included a total of 36 participants. In total, five utilities were present: Eskom (South Africa), RNT (Angola), LEC (Lesotho), EEC (Eswatini) and ZESCO (Zambia). All utilities have installed the model and SAEP guided them on running the planning model using their own utility data.
In Year 5, SAEP will focus on maintaining the model and providing technical support as needed to the SAPP members utilizing the model.

2.11.2 ADDITIONAL SUPPORT TO REGIONAL INSTITUTIONS

In Year 4, SAEP engaged in the following additional activities:

Support to SADC Secretariat

- **SADC Gender Baseline Survey.** SAEP finalized and submitted the SADC Energy Institution Gender Action Plan to the SADC Secretariat. In Year 5, SAEP will meet with the Secretariat to discuss the next steps and adopt the action plan with the SADC Gender Leads. The activity aims to assist the SADC Secretariat and regional energy institutions with tracking gender mainstreaming indicators.

- **SADC Member Energy Fact Sheets**. In accordance with the 2019 revised Regional Energy Access Strategy and Action Plan (REASAP) actions, SAEP supported SADC to update each member country fact sheet with energy access data from 2020 to describe the current member state energy situation and support electrification planning and energy access strategies. The inclusion of energy access fact sheets is an ongoing effort written within the 2019 revised REASAP actions as a part of the Planning and Knowledge Key Strategic Area. The revised REASAP also notes that the country fact sheets should be updated annually.

Support to SACREEE

- **SACREEE's Programmatic Engagement Strategy to Promote Renewable Energy and Energy Efficiency for Oceanic Members.** SACREEE is a subsidiary organization of SADC, mandated to scale up renewable energy and energy efficiency activities in all SADC member states which includes the island (Oceanic) and non-island members. As member states continue to work towards a common regional development agenda, there are disparities in the strategy to deliver and meet the region's energy access objectives. SACREEE notified SAEP of the challenges it is facing to deploy its programmatic intervention of promoting renewable energy and energy efficiency technologies in the Oceanic member states due to unique energy access connectivity priorities within the member states and requested technical assistance from SAEP. SAEP, in collaboration with

the National Renewable Energy Laboratory Clean Energy Solutions Center, supported SACREEE to outline the energy priorities for the Oceanic member states with the view to promote renewable energy and access. SAEP developed an engagement strategy report showcasing the Oceanic member state support areas and high-level recommendations for SACREEE. This report was finalized in May 2021 and shared with the Oceanic member states shortly after. SAEP will continue to engage with SACREEE to see if there are areas of the implementation that can be supported as the Oceanic members take on scaling up renewable energy and taking on energy efficiency projects.

Support to SAPP

- **The Regional Transmission Infrastructure Funding Facility.** To unlock and leverage the development of the interconnector projects, SAPP is undertaking, with support from the World Bank, a study on establishing a Regional Transmission Infrastructure Financing Facility (RTIFF). This fund will be a first of its kind financial structure that allows for pooled financing of regional transmission projects and an important catalyst to move stalled projects forward. In Year 4, SAEP continued to act as an advisor to SAPP by i) providing technical assistance as needed in reviewing SAPP's consultant Pegasys' deliverables and ii) assisting in socializing the RTIFF concept within the regional community. SAEP also takes part as advisors in the biweekly meetings with SAPP, the consultants, World Bank, SADC and RERA. In Year 4, SAEP reviewed the RTIFF institutional blueprint, RTIFF financial model and the TOR for the Phase 2 development of the facility and submitted advisory notes to SAPP. For Phase 2, SAPP has requested for SAEP to officially be part of the RTIFF Special Oversight Committee that SAPP is standing up, separate from and in addition to SAEP's current role as advisors. Phase 2 will focus on the financial model on a project-by-project basis, with the primary objective to stress test the model to validate the business case per project. The draft financial model developed in Year 4 by Pegasys (and which SAEP provided inputs and comments to) was submitted to the SAPP Management Committee who are yet to approve it.

- **Updated SAPP Access Guidelines for Potential New Members and IPPs.** SAEP developed new entrant guidelines to improve understanding of SAPP operations, governance, rules, benefits and obligations and support decision-making on membership. The guidelines provide background information on SAPP and lay out specific details on the road to membership for new entrants. SAEP submitted the guidelines to SAPP on 11 September 2021 for review. SAPP has approved the guidelines and is in the process of publishing them on the SAPP website for easy access for prospective new members.

Support to RERA

- **Digital Transformation for RERA.** SAEP is helping RERA to develop and deploy selected training courses through digital media to increase access to skills development for member regulators. The digital approach to training is a strategy that RERA wants to leverage to amplify skills development among its members and to decrease costs of travel and workshops. In Year 3, RERA developed an e-learning module on regulatory governance and another on regulatory impact assessment with SAEP's support. Based on SAEP's recommendations to develop a web-based learning management system (LMS), the RERA Secretariat is in process of subscribing to an identified LMS vendor who will integrate the LMS with RERA's website. RERA will host the two e-learning modules and other training and learning material on the its website for easy access. The LMS will support the virtual delivery of capacity building interventions for regional regulators, which has become especially pertinent in the times of COVID-19.

Building Sustainable Knowledge Sharing Across the Region

SAEP aims to share lessons learned from interventions delivered at the country level across the region through workshops, trainings, white papers, document releases and social media announcements in coordination and collaboration with SAEP regional partners SADC, RERA, SAPP and SACREEE. In Year 4, SAEP developed the following knowledge products:

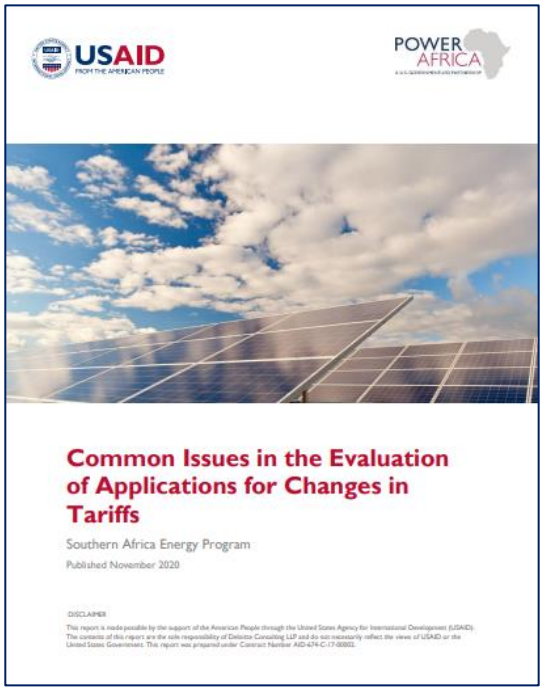
- **Independence of Regulatory Counterparts in the SADC Region Report.** Following a number of interactions over the first years of the program, SAEP has determined that while the region's regulators and RERA have progressed toward regulatory independence, regulatory independence in all Southern African countries does not yet exist. This activity involved an evaluation of the independence of regulatory counterparts in the SADC region using five critical criteria chosen by SAEP that resulted in a report that counterparts can use to enhance their regulatory independence. These criteria are i) Fixed Board Terms, ii) Staggered Board Terms, iii) CEO Appointed by Board, iv) Decision-making Authority Over Tariffs and (v) Independent Funding Source(s).

  Regulatory independence is critical to balancing the interests of suppliers and consumers of electricity. It refers to the ability of a regulatory authority to have an appropriate degree of autonomy in making economic and technical decisions for the sectors under its supervision. That, in turn, requires the regulatory authority to have institutional, financial and operational autonomy in respect to political authorities and stakeholders. An autonomous regulator is beneficial to the power sector because it is less susceptible to political pressure, which often prioritizes short-term decisions, and is more likely to make governance decisions that provide certainty to investors and consumers alike, thereby promoting investment in the power sector.

  At the conclusion of Year 4, this report was completed and undergoing USAID final review. The next steps, assuming USAID approval, will include SAEP commencing with the dissemination of the report, using appropriate methods, to counterpart regulatory authorities. SAEP also hopes to present the report at the next RERA Annual Conference, scheduled as a virtual event for November 2021, during the closed-door meeting/discussion with commissioners and board members.

- **Common Issues in the Evaluation of Applications for Changes in Tariffs Guide.** One of the most important responsibilities of a regulatory authority is to set rates. Rate cases must be properly executed to balance the interests of all market participants, send proper price signals to consumers and provide incentives for utilities to operate efficiently.

  The *Common Issues in the Evaluation of Applications for Changes in Tariffs* resulted from SAEP's work supporting Southern Africa regulatory authorities as they analyzed utilities' applications for changes in tariffs over the first four years of the program. In the course of that work, certain issues arose in different countries that caused significant discussion within the regulatory authorities.



This document is intended to serve as a reference tool for other regulatory authorities to use in their work since they will likely confront the same issues as those that requested SAEP support. In November 2020, SAEP completed this report and shared it with regulatory counterparts in the SADC region, with its practical impact already seen in Eswatini when ESERA used one of the concepts in the report (by not allowing the utility to claim depreciation expense on non-utility-funded assets) in its evaluation of the EEC rate case filing that saved ratepayers approximately USD $5.1 million.

At the conclusion of Year 4, the main report, a draft cover letter and a draft contact list for the wider dissemination to non-regulatory stakeholders were with USAID for their review. SAEP stands by for feedback and approval of the documents mentioned above, following which practical dissemination and subsequent planning of a webinar can promptly commence.

- **Credit Rating White Paper for Utilities and Regulators**. The financial sustainability of utilities is critical to their development as well as the countries they operate in. A key aspect of determining financial sustainability is the ability to access private funding. In this regard, the credit rating achieved by a utility has a significant bearing on the access and cost of private funding. Credit ratings are opinions that credit rating agencies express about an organization's ability to meet its future financial obligations, indicating the organization's commercial viability. To inform utilities in the region of the relevance and impact of credit ratings, SAEP developed a white paper titled "*What Utilities Should Know About Credit Ratings*." The credit rating white paper addresses one of the key constraints for investment, namely the low commercial viability of utilities. The objectives of the white paper are to: i) provide guidance for utilities and regulators on how credit ratings can be used as a tool for achieving commercial viability and attracting private investment and ii) set out the steps that utilities can take to obtain a shadow credit rating. Through the application of the generic rating framework developed in the paper, key stakeholders can work towards strengthening the commercial viability of utilities leading to access to funding. SAEP plans to release the white paper early in Year 5.

- **Generic Off-grid Company Sales Training Package.** SAEP developed a training package for off-grid companies to guide their workforce through SFE training, coaching sessions and project management training. This training package was developed based on previous SFE training that SAEP provided in Zambia and Malawi. The package consists of a summary document that provides detailed descriptions of each template included in the off-grid company training package. All templates are editable and can be tailored to meet a company's training context and needs. The Off-Grid Company Training Package is with USAID for review.

- **Learning Guides: Sharing Resources and Guidelines with Southern Africa's Energy Sector.** SAEP is developing learning guides that bring together topic-specific information, innovative approaches and resources developed through the Program's activities in the Southern Africa energy sector**.** The design and development of the guides involves transposing some of the lessons learned across different interventions into easy-to-use discussion papers and learning guides. Sharing SAEP's learning guides is a cost-effective method to maximize resources, promote sustainable reforms and enable other energy stakeholders and programs to build on SAEP's practical experiences. In Year 4, SAEP finalized three learning guides on Power Procurement, Utility Performance Management, and Off-Grid Energy Access. The three guides were, at the end of Year 4, with USAID for review.

Program Management, Finance, and Operations

3 PROGRAM MANAGEMENT, FINANCE, AND OPERATIONS

In Year 4, the SAEP PMO executed standard operating procedures to support technical delivery, manage relationships with counterparts and stakeholders and disseminate lessons learned across the region. In addition, SAEP's Finance and Operations (F&O) team, working closely with Deloitte's headquarters and played a crucial role in managing the program's operational needs, including procurement, office administration, security, IT support and logistics.

PMO & Finance/Operations Highlights

- USAID approved the FY21Q1 report on 8 March 2021
- USAID approved the FY21Q2 report on 18 May 2021
- USAID approved the Year 4 Work Plan on 22 February 2021
- USAID approved the PMEP version 9 on 20 May 2021
- Increased USAID and Power Africa's visibility by drafting regular social media posts and blogs
- Conducted successful DQAs with 11 companies in 3 countries (Malawi, Mozambique and Zambia)
- Awarded the Power Africa Madagascar Mini-Grid Development Grant to three companies in November 2020 during a successful live virtual event. USAID has committed up to USD $1.3 million in grant funding. To date only USD $128,267 in funding has been processed due to supply chain delays
- Yellow, a leading supplier of Pay-As-You-Go (PAYG) SHS and a Malawi Kick-Starter grantee was the first to reach and exceed its SHS sales target by recording 114,865 units in total sales by the end of September 2021. Yellow received USD $999,999 in grant funding
- Successfully migrated the Sage Payroll VIP system to the Sage Online Cloud. This allows online leave application and approvals and dissemination of important staff information like pay slips virtually

3.1 SAEP PROGRAM MANAGEMENT OFFICE

The PMO is an organizing body that focuses on integrating, facilitating and coordinating essential and transversal program functions including knowledge sharing and performance management, communications, monitoring and evaluation (M&E), environmental monitoring and gender mainstreaming. The section below details the key PMO deliverables for Year 4:

Knowledge Management. All SAEP technical results and deliverables are archived on the required platforms such as the SAEP shared Google drive, USAID Development Experience Clearinghouse (DEC) and USAID Development Data Library (DDL). The PMO also linked the relevant approved deliverables to the USAID deliverable tracker and made them accessible to USAID.

Project Management Support. The PMO continued to use Wrike as a project management system tool to successfully track all program activities from the planning to the implementation phase and archive all deliverables based on the activity results.

Monitoring, Evaluation and Learning. Through support from the PMO, all goals set for the year are systematically tracked and reported according to USAID standards and platforms.

SAEP Year 4 Work Plan. The PMO assisted in the development of the Year 4 Work Plan and submitted the first draft to USAID on 30 August 2020. USAID approved the Work Plan on 22 February 2021.

[13] Previous divider photo: IPP sub-station switchboard at Konkoonsies II Solar in the Western Cape. Konkoonsies is a 86 MW solar plant in South Africa that commenced commercial operations in October 2020. Photo Credit: USAID SAEP

SAEP Year 5 Work Plan. The Year 5 Work Plan planning phase kicked off in June 2021, with the PMO leading the process of compiling planned activities. The PMO worked with each activity manager to align the proposed activities with the Program objectives for Year 5. A first draft of the Year 5 Work Plan was submitted to USAID on 30 September 2021.

The Performance Management and Evaluation Plan (PMEP). In Year 4, the PMO team made some updates to the SAEP PMEP. Two updates were made to the PMEP with the first update being on 4 May 2021, and the approval from USAID being granted on 20 May 2021. The second update was submitted to USAID on 22 September 2021 and its approval is still pending. The first update was mainly to include updates to targets for Years 4 and 5 and also update the actual performance data in the Performance Indicator Reference Sheet (PIRS). The second update was as per direction from USAID that the SAEP PMEP should be updated to align more closely with the Power Africa M&E plan and there was also an update to the PIRS of one of the SAEP fee-based indicators.

The Environmental Mitigation and Monitoring Plan (EMMP)/Catalyzing Local Opportunities Fund (CLOF). The approved EMMP and CLOF Management Plan is regularly updated with the region's applicable environmental laws and regulations. The EMMP incorporates and monitors appropriate mitigation measures into all program activities based on the requirements of ADS 204.3. The EMMP also specifies how the requirements of the initial environmental assessment (IEE) and mitigation measures will be implemented and monitored. In Year 4, SAEP updated Version 3 of the EMMP with current environmental policy and legislature in the region to reflect the changes that have occurred. As no processes in the EMMP were changed, USAID did not approve and did not need to approve the latest version.

Gender Integration. In Year 4, SAEP continued to integrate gender into planned activities and implemented gender-specific activities that focus on promoting female leadership in energy institutions, improving female empowerment and increasing access to electricity. SAEP focused on engaging with key stakeholders on the importance of women empowerment and understanding how those institutions are currently considering gender equality in their operations and service delivery. For example, the Gender team supported the SADC Secretariat to develop a gender baseline report and Gender Action Plan (GAP) and supported RDG Collective, a SHS company in Zambia, to develop a GAP.

Quarterly Program Performance Reports. Since the Program's inception on 14 March 2017, SAEP has submitted 14 quarterly reports to USAID (the annual reports include the years quarter 4). The FY21Q4 report forms part of this Annual Report.

Biweekly Status Reports. SAEP has been reporting on activities and outcomes every two weeks since 12 April 2017. The biweekly report template has been updated throughout the years as needed. The report itself has become instrumental in keeping USAID and the wider Power Africa team members informed about SAEP's work by outcome and/or country. In Year 4, the template was updated to include a section called *New Trade Leads for Power Projects in Africa* and the layout of the template was updated to improve overall readability.

USAID FROM THE AMERICAN PEOPLE

POWER AFRICA

Friday, 10 September 2021

USAID | Southern Africa Biweekly Report

Project Name: Southern Africa Energy Program
Reported By: Liz Pfeiffer, Chief of Party
Reporting Period: 28 August – 10 September 2021

Special Highlights During the Period

- SAEP continues to provide strategic advisory support to the Government of Malawi (GoM) to move the 350 MW Mpatamanga hydropower project closer to financial close (FC). Following the release of the request for proposals (RFP) for a project sponsor to the prequalified bidder on 25 August 2020, SAEP has been instrumental in guiding the various GoM departments and advisor teams to liaise with the bidder and advance project development. The bidder is expected to submit its bid for project sponsor on 17 September 2021. Important highlights from this reporting period in preparing for the evaluation of the bid are:
  - SAEP supported the government's tender agent advisors, K&M, to develop the evaluation protocol that the GoM will follow upon receipt of the bid. SAEP also engaged with the Public-Private Partnership Commission (PPPC) and K&M to identify all required workstreams to conduct such an evaluation under the laws of Malawi and made logistical arrangements for the GoM's evaluation. The technical and financial evaluation of the bid is expected to take at least two weeks and the GoM evaluation committee will convene at Mangochi in Malawi to complete this workshop during the week of 20 September 2021
  - After evaluating the two financial bids received for the government's legal counsel, the GoM selected Herbert Smith Freehills (HSF) as the winner on a combined technical and financial score. Seeing as HSF was the incumbent legal counsel for GoM, there is no need for a handover process and SAEP was able to quickly get HSF up to speed on the current status of various project development streams. The onboarding of GoM's legal counsel was an essential step as the legal counsel will lead the GoM's negotiation of the project agreements with the bidder for project sponsor during the fourth quarter of 2021
- SAEP finalized the Year 5 Work Plan and submitted it to USAID on 30 August 2021

COVID-19 Impact on Program Delivery

- The COVID-19 pandemic is testing the limits of governments, societies and economies and as such, has also impacted aspects of SAEP program delivery and expected outcomes. The following summarizes the major effects during this period:
  - Support to EDM to Improve Customer Relationship Management Through Human-Centered Design (HCD)
    - SAEP and EDM are testing the three HCD solutions developed in Year 3 through an initial pilot activity with two EDM delegations. Due to the COVID-19 impact on the counterpart teams, the delegations are now working on a rotating basis – different teams work each week and for a limited time (from 8 a.m. to 2 p.m.) – which in turn impacts activity implementation and access to resources. Some of the EDM delegation appointed managers for the activity do not have laptops to quickly proceed with the completion of the proposed templates and revert with progress to the pilot. SAEP and EDM project teams are doing everything possible to overcome these challenges in the working sessions with managers

Trip Reports. Due to the COVID-19 pandemic, most travel was placed on hold, except for prioritized activities, which took place under strict precautionary measures. SAEP provided feedback on travel by drafting trip reports that were shared with USAID and Power Africa to keep them abreast of SAEP's travel activities.

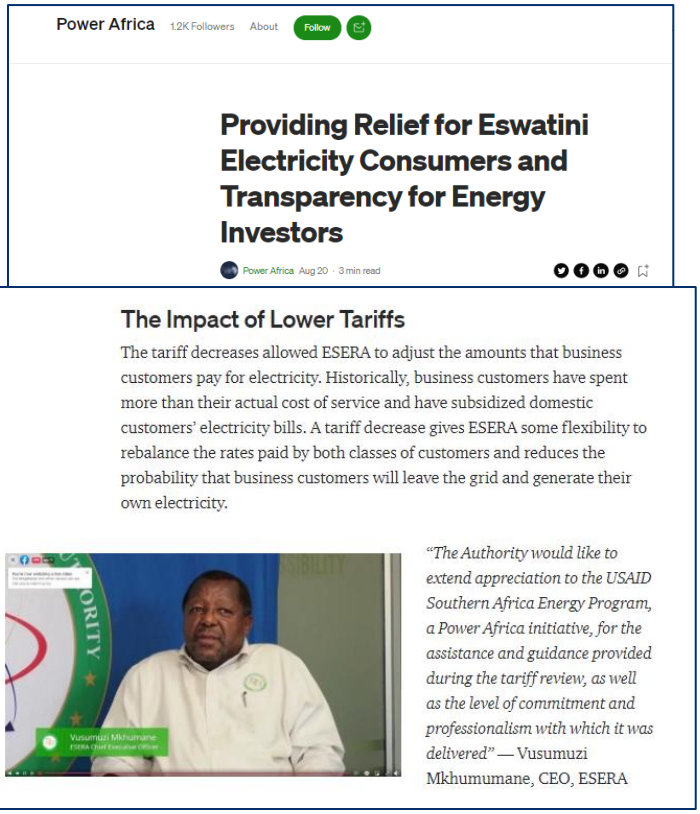
Communication Deliverables. The SAEP Communications team updated, developed and implemented various communication materials such as country fact sheets, topic-specific document releases, social media content, infographics and success story blogs. The two success stories for FY21Q4 form part of this Annual Report.

3.1.1 COMMUNICATIONS AND OUTREACH

In Year 4, SAEP continued to document and communicate the Program's purpose, goals and successes from Program start-up to the present. The documents and content developed served as promotional material for events, outreach activities and social media platforms. Focus areas included increasing the Program's social media and alternative media (blog) presence, by creating short write-ups and blog posts on successes achieved, implementing processes for Program-specific communications and conveying impact from activity delivery. The following is an overview of major activities and outcomes from Year 4:

Blog Posts: Drafted the following blog posts, which were posted on Power Africa's online publishing platform, Medium:

- Power Africa Awards $1.2 Million in Grants for the Development of Mini-Grids in Madagascar
- Bridging the Power Gap in Angola, which went live on Medium on 18 March 2021
- Power Africa Grant Helps Improve Electricity Access for Thousands of Malawians Living Beyond the Grid, which went live on Medium on 12 April 2021
- Linking Electricity to Economic Growth and Energy Security: Mozambique's Temane Transmission Project, which went live on Medium on 26 April 2021 in both English and Portuguese
- Providing Relief for Eswatini Electricity Customers and Transparency for Energy, which went live on Medium on 20 August 2021



Prepared around 30 social media posts, that were shared with Power Africa to be posted on their social media platforms. The topics included:

- SAEP's collaboration with Kafue Gorge Regional Training Centre (KGRT)
- Madagascar Mini-Grid Development Grant Winners Announcement Virtual live event
- Mozambique Route-to-Market geospatial tool document release
- Success stories/good news from the grantees under the SHS Kick-Starter Program for Malawi

- Content on the progress of the Malawi SHS Kick-Starter Program for Malawi in celebration of International Day of Education
- Content to amplify the Malawi off-grid video created
- The Endangered Wildlife Trust's (EWT) work with utilities in Botswana, Malawi, Mozambique, and Namibia to develop a wildlife-friendly management strategy in celebration of World Wildlife Day
- The announcement of SIAZ's new executive members; three out of the four being female – in celebration of International Women's Day
- Posts to accommodate the blog titled *Power Africa Grant Helps Improve Electricity Access for Thousands of Malawians Living Beyond the Grid*
- Posts to accompany the blog titled *Linking Electricity to Economic Growth and Energy Security: Mozambique's Temane Transmission Project*
- Updated Mozambique Route-to-Market Version 6 Geospatial Tool for off-grid energy service providers
- The EWT's work on equipping utilities to better manage wildlife and electricity infrastructure interactions and reduce the impact thereof on wildlife
- EDF Renewables connecting its 34.5 MW Wesley-Ciskei Wind Power Station to South Africa's power grid, bringing electricity to approximately 14,000 households. This 10-turbine project, located in the Eastern Cape province, was selected by South Africa's DMRE under the fourth round of REIPPPP and will sell clean electricity to Eskom under a 20-year PPA
- Energy consumers in Eswatini saving roughly USD $44 million over the next two years, thanks to SAEP's assistance in evaluating certain parts of the EEC's tariff application
- Namibia's *New Era* newspaper article announcing that the CoW has electrified 3,200 households over the past three years and that a municipal council meeting held on 12 August 2021 reviewed and approved the city's five-year electrification plan
- The SHS Kick-Starter Program for Malawi reaching 85,000 connections

According to Power Africa's statistics: This post was in the top 1% engagement on LinkedIn and within one day of posting, the post on Twitter (tweet) had the most impressions for the week ending 19 March 2021

LinkedIn. The SAEP LinkedIn page is a platform for sharing timely program updates including, but not limited to, job postings and grant opportunities and provides SAEP with an engaging, up-to-date digital presence. During Year 4, the LinkedIn page was regularly updated with vacancy announcements, the sharing and amplifying of other posts and SAEP's own social media content.

By the end of September 2021, the SAEP LinkedIn page reached 4,451 followers, which is an increase of 1,551 from last year's September follower count of 2,900.

Events. During Year 4, the Communications team planned and executed the following events:

- **The Power Africa Madagascar Mini-Grid Development Grant Winners Announcement event on 23 November 2020** on Zoom with around 35 participants. The U.S. Ambassador to Madagascar, Michael Pelletier, Minister of Energy, Water and Hydrocarbons, Christian Ramarolahy, and Power Africa Coordinator, Mark Carrato, attended and gave remarks. The Communications team i) developed talking points for USAID/Madagascar and SAEP's COR, ii) liaised with the grantees to record their speeches, iii) liaised with the appointed video company on all matters related to the recording of the speeches prior to the live event, the dry-run and the actual live event, iv) drafted a scene setter for the event, v) drafted social media posts on the event and shared these with Power Africa and vi) liaised with the interpreters prior to and on the day of the event

Madagascar Mini-Grid Development Grant Winners Announcement virtual live event on 23 November 2020

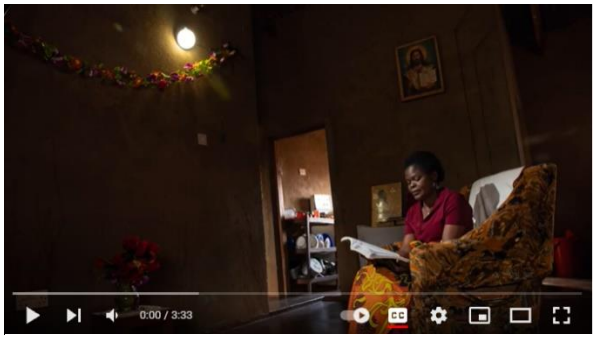
- **The SADC Capacity Building Workshop on Building Effective Electrification Programs** by i) reviewing, copy-editing and formatting the presentations for the workshop and ii) liaising with the SADC Secretariat and the interpreters (who conducted simultaneous French and Portuguese interpretation) on logistics for the workshop. The event successfully took place on 29 June 2021 with around 70 participants.

Visual/Digital Public Relations (PR) Material. The Communications team developed and published the following PR material during Year 4:

Photo and Videos. In an effort to expand SAEP's photo database used for internal and external communication and marketing, the Communications team coordinated the following:

- **Photos and Videos of Rural and Urban Malawi:** Drafted a TOR and made logistical arrangements for a Malawi-based video company to capture footage of rural and urban electricity infrastructure and film interviews with SHS Kick-Starter grantees. This task was successfully executed on 6 October 2020

- **Malawi Off-Grid Video:** Drafted a TOR, concept note and script for a South African-based company to develop a three-minute video of SAEP's support to the off-grid energy sector over the past two years and showcase resulting impacts from this work. The video went live on Power Africa's YouTube channel on 19 February 2021

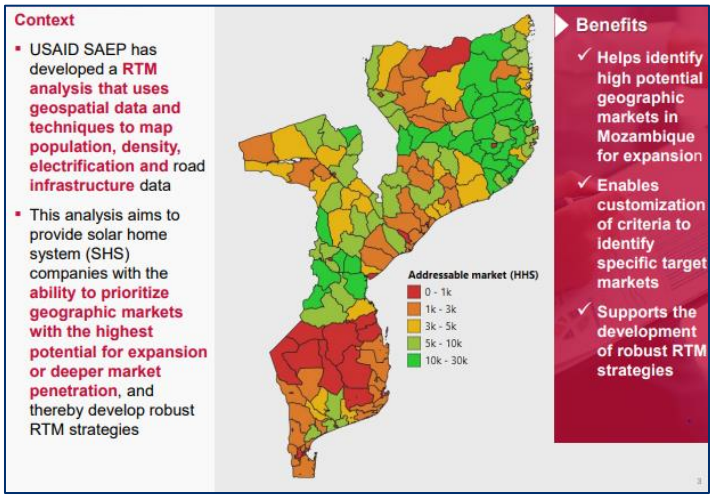


*Click **here** to watch this short video about the impact of Power Africa's work in Malawi.*

- **SAEP Overview Video**: Drafted a concept note and script for the video and liaised with the video company on the development of the video. This video was finalized and presented at the Power Africa Partners Meeting on 15 April 2021 to showcase to the Power Africa partners what SAEP does and the Program's highlights and achievements to date. Click here to watch the video
- **Angola Energy Infrastructure Photos**: Contracted an Angolan-based video company, to capture high-quality photographs of energy infrastructure and related field photography. SAEP received these photos on 1 June 2021

Knowledge Products. During the course of Year 4, the Communications team assisted in finalizing the following knowledge products and communications materials for public release:

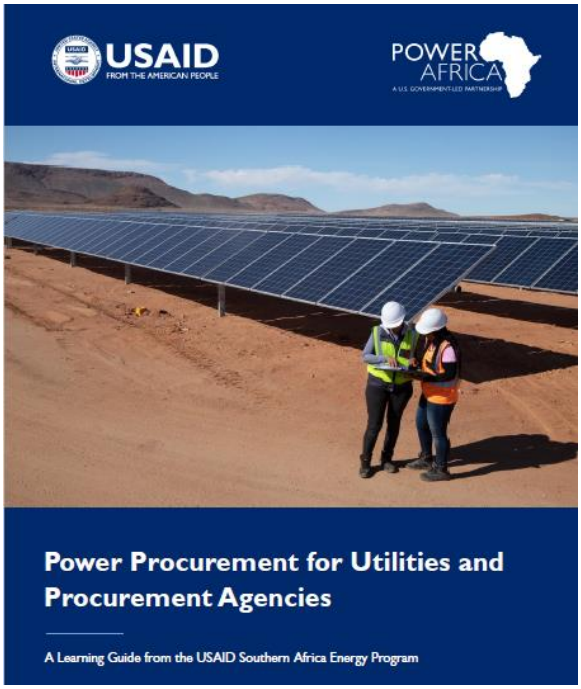
- **Mozambique RTM Version 6 Geospatial Tool**: Publicly announced the updated Mozambique RTM Version 6 Geospatial Tool for off-grid energy service providers through a document release email and social media posts on 1 June 2021



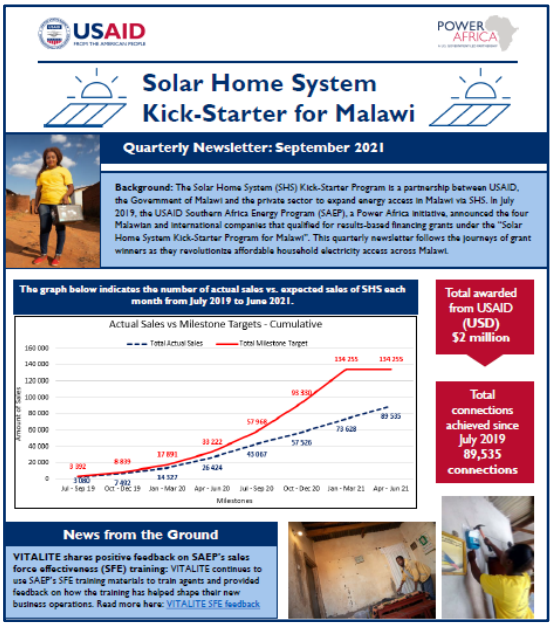
Snippet of the Mozambique RTM Geospatial Tool V6 user guide

- **Utility Performance Management Learning Guide:** Developed a document release note to announce the learning guide, social media posts and a graphic. These documents were sent to USAID for review and approval on 23 June 2021. Once approved, the LG will be announced through a document release note email to a targeted email list and through social media posts on Power Africa's social media platforms.

- **Power Procurement Learning Guide:** Assisted in formatting of the LG, drafted a document release note, social media posts and a graphic to announce the release of the LG. All items were approved by Power Africa on 27 September 2021. The LG should be released in FY22Q1, subject to review and approval of the updated LG template
- **IPP Financial Model:** Assisted in the development of a user guide for this model, developed a graphic, social media posts, a Google Form and a document release note to announce the model. All items were shared with Power Africa on 22 September 2021. All items are being updated and finalized and the model should be announced to the public in FY22Q1
- **Off-Grid Company Training Package**: SAEP put together a training package for off-grid companies to guide their workforce through SFE training, coaching sessions and project management training. The package consists of a summary document that provides detailed descriptions of each template included in the training package. In addition, the Communications team developed a graphic, social media posts and a document release note to announce the release of this training package. All documents will be shared with USAID in FY22Q1



SHS Kick-Starter Program for Malawi Newsletter. Developed three newsletters during Year 4 (for Milestone 6, 7 and 8), which were distributed to the grantees, the working capital providers and USAID/Malawi. The purpose of the newsletter is to keep track of the status of the Program and report on the progress, success stories and good news as a result of the Program.



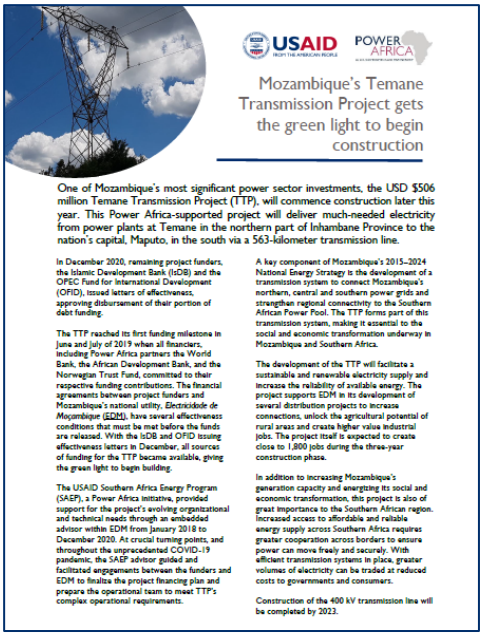
Fact Sheets. Developed the following country fact sheets, which were also approved by USAID:

- Country Fact Sheet for Eswatini
- Country Fact Sheet for Lesotho
- Country Fact Sheet for South Africa

The Communications team is in the process of updating all other SAEP country fact sheets, which will be shared with USAID in FY22Q1.

Success Stories. Developed the following success stories (full stories are available in Appendix A):

- USAID/Power Africa Grant Program Supports Solar Home System Companies to Connect Thousands of Malawians to Electricity
- USAID Helps Three Southern African Utilities Connect Over Half a Million New Customers to Electricity
- Green Light for Mozambique's Temane Transmission Project to Begin Construction
- Relief for Eswatini Electricity Consumers as Electricity Tariffs
- Malawi's Generating Company Improves Disaster Recovery Planning
- SHS Kick-Starter Grantee Achieves Major Milestone


USAID POWER AFRICA

Mozambique's Temane Transmission Project gets the green light to begin construction

One of Mozambique's most significant power sector investments, the USD $506 million Temane Transmission Project (TTP), will commence construction later this year. This Power Africa-supported project will deliver much-needed electricity from power plants at Temane in the northern part of Inhambane Province to the nation's capital, Maputo, in the south via a 563-kilometer transmission line.

In December 2020, remaining project funders, the Islamic Development Bank (IsDB) and the OPEC Fund for International Development (OFID), issued letters of effectiveness, approving disbursement of their portion of debt funding.

The TTP reached its first funding milestone in June and July of 2019 when all financiers, including Power Africa partners the World Bank, the African Development Bank, and the Norwegian Trust Fund, committed to their respective funding contributions. The financial agreements between project funders and Mozambique's national utility, *Electricidade de Moçambique* (EDM), have several effectiveness conditions that must be met before the funds are released. With the IsDB and OFID issuing effectiveness letters in December, all sources of funding for the TTP became available, giving the green light to begin building.

The USAID Southern Africa Energy Program (SAEP), a Power Africa initiative, provided support for the project's evolving organizational and technical needs through an embedded advisor within EDM from January 2018 to December 2020. At crucial turning points, and throughout the unprecedented COVID-19 pandemic, the SAEP advisor guided and facilitated engagements between the funders and EDM to finalize the project financing plan and prepare the operational team to meet TTP's complex operational requirements.

A key component of Mozambique's 2015–2024 National Energy Strategy is the development of a transmission system to connect Mozambique's northern, central and southern power grids and strengthen regional connectivity to the Southern African Power Pool. The TTP forms part of this transmission system, making it essential to the social and economic transformation underway in Mozambique and Southern Africa.

The development of the TTP will facilitate a sustainable and renewable electricity supply and increase the reliability of available energy. The project supports EDM in its development of several distribution projects to increase connections, unlock the agricultural potential of rural areas and create higher value industrial jobs. The project itself is expected to create close to 1,800 jobs during the three-year construction phase.

In addition to increasing Mozambique's generation capacity and energizing its social and economic transformation, this project is also of great importance to the Southern African region. Increased access to affordable and reliable energy supply across Southern Africa requires greater cooperation across borders to ensure power can move freely and securely. With efficient transmission systems in place, greater volumes of electricity can be traded at reduced costs to governments and consumers.

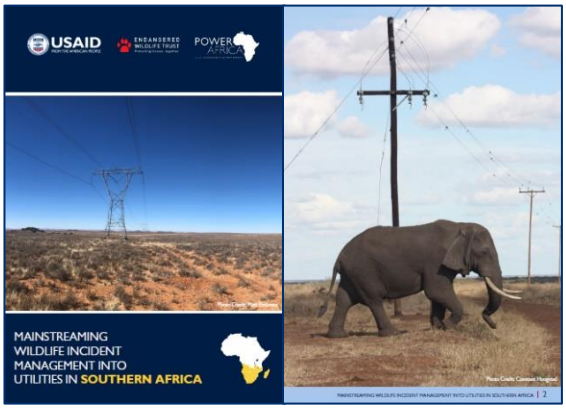
Construction of the 400 kV transmission line will be completed by 2023.

The two success stories for Q4 of Year 4 form port of this Annual Report subject to USAID review and approval:

- Mitigating Wildlife and Energy Infrastructure Collisions in Mozambique
- USAID/Power Africa Grantee Expands Operations and Lights Up 114,500+ Households in Malawi

Program Liaison: To foster outreach, build new relationships and increase visibility of Power Africa and USAID the Communications team:

- **Joint Communications Meetings with Power Sector Programs:** Held monthly meetings with the Communications teams of the West Africa Energy Program (WEAP) and Nigeria Power Sector Program (NPSP) to share ideas and lessons learned on communication activities and initiatives within the respective Programs
- **Kafue Gorge Regional Training Centre (KGRTC):** Had numerous meetings with the KGRTC marketing team to discuss and plan SAEP's collaboration with KGRTC, which was announced through Power Africa's social media platforms. SAEP will continue to share learning guides and energy related training and workshop materials with KGRTC who will host these on its digital platform during and after the tenure of the Program
- **EWT Handbook:** Reviewed and provided feedback on the design and layout of the *Mainstreaming Wildlife Incident Management into Utilities in Southern Africa* handbook. A final version of the handbook was approved by SAEP on 29 June 2021



SAEP Templates

- **Reporting and PowerPoint (PPT) Templates:** Updated SAEP's report and PPT templates to offer cover options relating to both off-grid and on-grid topics and to adapt to the more modern and universal widescreen PPT template. These templates were shared with USAID for review and approval on 20 September 2021

- **Learning Guide Template:** Developed a standardized design for SAEP's learning guides in PPT and Word format and shared these with USAID for review and approval

Copy-Editing and Formatting. Continued to review and edit major deliverables in various publication forms for readability, spelling, grammar, accuracy, punctuation, and consistency

3.1.2 PROGRAM PERFORMANCE MANAGEMENT

The program performance management (PPM) function is a key aspect of the PMO. PPM focuses on the coordination of program related activities ranging from knowledge management to supporting program management activities. The PPM is responsible for monitoring the performance of SAEP activities as well as documenting results related to these activities. The following is an overview of the PPM's role and activities in Year 4:

Knowledge Management. Monitored the progress of the SAEP Year 4 Work Plan activities and coordinated activity status updates using the Wrike project management tool. In addition, the Project Performance Specialist documented the Year 4 activity updates, including final results on the Master File Tracker and shared it with USAID/Southern Africa on a continuous basis. SAEP Year 4 deliverables authorized for public access were also uploaded to the USAID DEC on a continuous basis

Project Management Support. Continued to provide regular training and support to the SAEP team on the effective use of Wrike

Work Plan Revisions. The Year 4 Work Plan went through revisions every quarter to incorporate updates and changes to activities. These revisions and amendments included the addition of new activities and modification of some activities due to the impact of the COVID-19 pandemic

Monitoring and Evaluation: Continues providing the necessary support to the SAEP team where needed. The M&E team maintained an up-to-date status of transactions and calculated performance indicators for SAEP quarterly reports and other ad-hoc requests. In addition, the M&E team updated the required Power Africa Information systems such as PATT, Power Africa Information System (PAIS), Development Information Solution (DIS) and Training and Exchanges Automated Management System (TEAMS) and other reports as needed.

Support with Surveys: Through SurveyMonkey, the M&E team assisted the technical teams to develop and analyze numerous surveys. The surveys were mainly for capacity building initiatives that were planned or conducted by the technical teams with some of SAEP's counterparts, namely: SACREEE, SAPP, SALGA and the Malawi Kickstarter program grantees.

Performance Management and Evaluation Plan (PMEP) **updated**: In Year 4, the PMO team updated the PMEP twice and submitted it to USAID for approval. The first update, version 9, was submitted to USAID for approval on 4 May 2021 and the approval was granted on 20 May 2021. The second update, version 10, was submitted on 22 September 2021 and approval is still pending. The updates in version 9 had the following changes:

- Updates to some SAEP targets. Replaced "TBD" with actual targets for Year 4 and 5 for the following indicators:
    - Expected lifetime energy savings from energy efficiency or energy conservation, as a result of SAEP assistance
    - Greenhouse Gas (GHG) emissions reduced, sequestered, and/or avoided

    - National energy mix showing percentage of MWs from clean energy technologies in each country
    - Kilometers of power lines constructed or rehabilitated broken out by transmission and distribution
    - Electricity loss reduction (aggregated losses)
    - U.S. exports supplied for energy projects
    - Partner Commitment Tracking
    - Estimated number of beneficiaries: number of beneficiaries with anticipated access to connections
    - Estimated number of beneficiaries: number of beneficiaries with actual access to connections
    - Number of competitive procurement processes for new generation capacity implemented with USG Power Africa assistance
    - Number of host-government power sector strategic planning documents adopted, implemented, or revised, with U.S. Government (USG) Power Africa support
    - New electricity capacity committed for regional trade through bilateral agreements
    - Number of U.S. companies that participate in Power Africa outreach events
    - Number of U.S. companies participating in Power Africa projects/transactions
- Updated Annex 4 to 6 with the actual performance for Year 4 up to Q3 for all indicators

The second update, Version 10, which was submitted on 22 September 2021 had the following changes:

- Indicator updates - revisions were made to the definitions and calculations of some indicators:
    - Generation and Transmission Capacity (MW) pending Financial Close (FC): The Performance Indicator Reference Sheet (PIRS) was updated to reflect changes on how this indicator is calculated. There are also updates to the targets
    - Capacity (MW) from transactions supported by SAEP that achieved FC: The verification process on PATT was updated with a list of source documents that can be used to prove transactions FC
    - Generation capacity commissioned: updated the verification process section on PATT for transitions that have reached Commercial Operation Date (COD) with inclusion of list of supporting documentation
    - Amount of investment mobilized for energy projects: This indicator is newly included to replace the "amount of public and private investment leveraged (billions USD) for energy" indicator. Going forward, SAEP will now be reporting all amounts/funds mobilized under this indicator
    - GHG emissions reduced, sequestered, and/or avoided: an update to the indicator description that explains that SAEP will not be reporting this indicator on PAIS as Power Africa will source the information directly from Inner City Fund (ICF) the developers of the Clean Energy Emission Reduction (CLEER) tool). SAEP will also report the calculated figure received from ICF on DIS
    - Estimated number of beneficiaries with anticipated access to connections: This indicator has been removed from SAEP's list of tracking indicators because Power Africa calculates this indicator using a standard methodology
    - Estimated number of beneficiaries with actual access to connections: This indicator has been removed from SAEP's list of tracking indicators because Power Africa calculates this indicator using a standard methodology
- Updates to Annexure 3 – updated to include all Power Africa indicators and their respective indicator numbers in reflection of PIRS
- Annexure 5 and 6 have been merged together – merged Power Africa indicator annexures

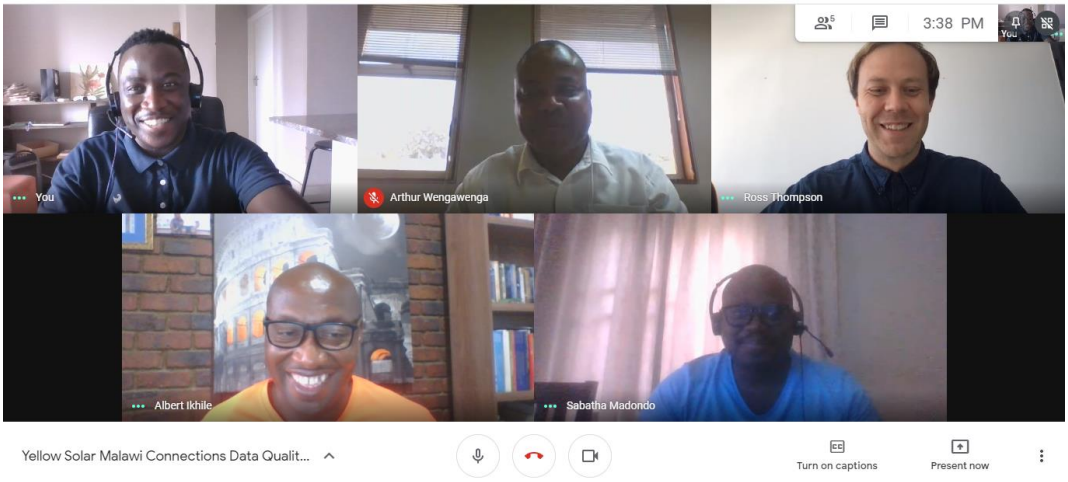
- Updates to Annexure 5 PIRS – the numbering on all the Power Africa indicators has been updated to reflect the numbering in the Power Africa MEL Plan
- Updates to actual performance in PIRS – The actual performance was updated in the PIRS to reflect performance as of FY21Q3
- Annual target setting – Provided an explanation on the target setting process (section 4.3, page 8 and 16), consisting of setting quarterly, annual and life of project targets. The annual targets are set as part of the work plan development

Quarterly Reporting Requirements. As part of USAID and Power Africa's reporting requirements, all implementing mechanisms need to upload their reported data for performance indicators and the transaction status on the standard USAID and Power Africa reporting platforms on a monthly and quarterly basis. In Year 4, the PMO team was able to adhere to all of these requirements and update SAEP's information on these platforms. The USAID and Power Africa standard reporting platforms are the following:

- DIS – Development Information Solution (quarterly reporting)
- PATT – Power Africa Transaction Tracker (monthly and quarterly reporting)
- PAIS – Power Africa Information System (quarterly reporting)
- TEAMS – Training & Exchanges Automated Management System (quarterly reporting)

SAEP-led Data Quality Assessments. In Year 4, the PMO conducted a data quality assessment of the previously reported data. SAEP conducted these on the connections data received from three countries (Malawi, Mozambique and Zambia). The purpose of the data verifications was to assure the quality of the data that SAEP had used in reporting. Due to COVID-19, the process had to be conducted virtually and it involved comparing the numbers previously reported by the counterparts with the information currently contained in the customer relationship management (CRM) software. The DQAs were conducted with the following companies on the following dates:

- Malawi:
    - Green Impact Technologies on 16 February 2021 and 24 February 2021
    - Zuwa Energy on 17 February 2021
    - Yellow Solar on 18 February 2021 and 22 February 2021
    - VITALITE on 23 February 2021
    - SolarWorks! on 24 February 2021



- Zambia:
    - Kazang Solar on 24 March 2021
    - SunnyMoney on 26 March 2021

    - Vitalite on 25 March 2021 and 26 March 2021
    - SupaMoto on 30 March 2021
    - WidEnergy on 31 March 2021
- Mozambique:
    - EDM on 24 May 2021 and 25 May 2021

USAID-led Data Quality Assessments. This type of DQA is one which USAID conducts on all of its implementing mechanisms, typically twice within the life of a Program. It is a requirement for all USAID's operating units' performance indicator data every three years or within 12 months after a new indicator has been adopted. Power Africa had last conducted a DQA of their performance indicators in 2018. It was therefore necessary for a DQA to be conducted within 2021. This DQA was successfully conducted with SAEP on 20 September 2021, and SAEP awaits the final report.

Data Verification for SHS Kick-Starter Program for Malawi. The PMO team conducted quarterly verifications of all data submitted by the grantees under the SHS Kick-Starter Program for Malawi. As part of the grant agreement, all milestone data submitted needs to be verified against the attached CRM data extract for each grantee. This verification process was conducted every quarter and will continue until the end of the grant program. This process is different from the standard DQA as, for the Kickstarter grant, this is a process that occurs every quarter and is generally for only a specific reporting quarter and is conducted to enable payment. It is mainly a desktop exercise of comparing the reported data with the CRM extract that has been submitted through Fluxx.

3.1.3 ENVIRONMENTAL MITIGATION AND MONITORING

In Year 4, SAEP continued to implement the SAEP environmental compliance monitoring system. The Environmental Specialist worked with the activity managers to assess potential adverse environmental impacts and develop mitigation measures on an activity level through the use of Environmental Review Forms. In accordance with the EMMP, the Environmental Specialist facilitated appropriate environmental due diligence activities, as codified by an environmental assessment form, including aligning operations with existing performance standards and complying with national and international environmental frameworks. All SAEP SOWs include a section that indicates that SAEP commits to comply with environmental and social impact requirements. The following additional environmental, mitigation and monitoring support was provided in Year 4:

SHS Kick-Starter Program for Malawi. Requested all grantees under the SHS Kick-Starter Program for Malawi to provide a compliance report, which includes their own EMMP. SAEP then reviewed and approved these EMMPs. The purpose of these reports is to indicate to USAID that the grantees are environmentally responsible in the work that they do. SAEP is in the process of monitoring the compliance of the developed EMMPs and expects the SHS grantees to submit a compliance report in quarter 1 of Year 5.

Assistance to RNT. In Angola, SAEP's environmental team has contributed to increasing the environmental management skills of RNT's PIU, in particular by assisting and advising RNT on environmental and social issues related to the 400 kV transmission line project. In Year 4, SAEP assisted RNT to:

- Acquire the environmental installation license received in June 2021
- Develop the TOR for the Environmental Safeguards Specialist, the Environmental Auditor, Social Safeguards Specialist, Gender Specialist and Monitoring and Supervision Consultant
- Draft the Environmental and Social Management Plan (ESMP) checklist
- Update the monthly progress reporting tool

- Develop and update the AfDB quarterly reports for Social and Environmental
- Develop the ESMS tools such as the data room, template for the ESMS, ESMP audit checklist and complaints register tool
- Provided capacity building on all Environmental and Social Management System (ESMS) tools developed

EWT Energy and Wildlife Activity. Lead the EWT team in their assistance to Eskom South Africa and EDM in Mozambique in developing an energy and wildlife interaction program and the Mainstreaming *Wildlife Incident Management into Utilities in Southern Africa* Handbook. These three activities progressed well in Year 4 with the following highlights listed below:

- The first two phases of the EDM activity have been completed, which include i) conducting site visits to areas where energy and wildlife interactions are frequent, and ii) developing a report to address the energy and wildlife interactions. SAEP and EWT met with EDM's BoD on 30 September 2021 to present the findings from the energy and wildlife readiness assessment, along with the next tasks to be completed by EWT with EDM. Next steps include the EWT providing training to EDM's management, transmission and distribution teams and developing a wildlife management data management tool for EDM
  For more details, refer to the success story section in Appendix A.

Figure 19: The global effort to increase clean, affordable and reliable energy access comes at a cost to wildlife. Photo Credit: EWT

- EWT conducted 90 field visits in protected areas in South Africa and developed reports based on its visits (to each of South Africa's provinces). SAEP is in the process of reviewing these reports, which will be provided to USAID and Eskom in FY22Q1
- The *Mainstreaming Wildlife Incident Management into Utilities in Southern Africa* handbook's layout has been completed and a final version of the handbook should be ready in Year 5 and will then be distributed to all utilities in Southern Africa

Other: The Environmental Specialist promoted SAEP environmental work by presenting at the following two conferences in Year 4: i) African Conference for Linear Infrastructure and Ecology conference, and ii) the International Association for Impact Assessment South Africa conference, with a specific focus on achieving the Sustainability Development Goals and promoting the drive towards combating climate change through highlighting lessons learned in developing renewable energy and transmission line infrastructure projects.

The Environmental Specialist also investigated the waste cycle for SHS in Zambia to determine if the process to manage waste from the SHS industry is acceptable and in line with best practice, this was challenging as few companies responded to get a viable representation of data. This study has been amended and compiled in Year 4 and the final report will be issued to USAID in Year 5.

3.1.4 GENDER

In Year 4, SAEP continued to integrate gender into planned activities and implement gender-specific activities that promote female leadership in energy institutions, improve female empowerment and increase access to electricity. SAEP focused on engaging with key stakeholders on the importance of women empowerment and understanding how those institutions are currently considering gender equality in their operations and service delivery.

SADC Secretariat: The Gender team supported the SADC Secretariat to develop a gender baseline report and Gender Action Plan. The objective of the assignment is to assist the SADC Secretariat and regional energy institutions with tracking gender mainstreaming indicator M&E processes and sharing with SADC a baseline on their current status on gender mainstreaming for specific indicators.

SHS Kick-Starter Program for Malawi: The Gender team worked on a study to collect insights into the implications of the purchase and use of SHS for women customers, as well as the potential impact of female sales agents and managers on SHS company success. SAEP completed data collection via surveys distributed by the SHS companies to their sales agents and SMS surveys distributed by a third-party survey firm, GeoPoll, to SHS customers. The SAEP Gender team plans to have a virtual convening event in Year 5 to share recommendations and findings from this analysis. The purpose of the event will be to help the grantees under the SHS Kick-Starter Program for Malawi and similar SHS companies shape their business operations and hiring process to be more gender-inclusive.

Angola RNT Gender Action Plan (GAP). The overarching purpose of the GAP is to assist RNT to address gender inequality in employment through the lifecycle of the project and to address Gender-Based Violence (GBV) and treatment of women in general in the communities the project will impact on. The SAEP Gender team held a number of working sessions with RNT to expose RNT to the concept of a GAP and to gather data for the development of the GAP. SAEP is also developing tools to implement the GAP, which is in progress and will continue into the first quarter of year 5. Gender equality initiatives are a key support area for SAEP and the AfDB Project Appraisal Report (PAR) requires RNT to develop and implement a Gender Mitigation Framework, which in essence is a GAP. The AfDB and the World Bank are driving the inclusion of gender mitigation frameworks within all funded projects funded.

RDG Collective Gender Action Plan. SAEP assisted RDG Collective Zambia to develop a Gender Action Plan and leading practices for developing a Gender Policy. RDG, based in Zambia, is a multinational, for-profit company that designs, manufactures, distributes and finances SHS. SAEP will continue support to the company in Year 5 including training on gender sensitization, training on HR/gender policies and support for female agent recruitment/retention.

3.2 FINANCE AND OPERATIONS

In Year 4, SAEP continued operating in a remote working environment for most of the Program's activities due to the ongoing COVID-19 pandemic. The SAEP F&O team continued to refine all processes related to project financial management, compliance and statutory reporting, office administration and security, recruitment and performance evaluation, subcontracting and Independent Contractor Agreement (ICA) management, travel and logistics coordination, technology support and grants management. SAEP successfully completed its annual external audit for FY20 and received an unqualified report (which concludes that the financial statements prepared are without any misstatements and that the current control environment within Deloitte Consulting Overseas Projects LLC is strong) along with positive feedback on the financial controls in place. SAEP submitted all monthly VAT returns, responded to audit queries raised by the South African Revenue Service (SARS), and received all refunds.

During Year 4, the Southern Africa region moved through a series of lockdowns, restricting travel and movement of people, in-door and out-door gatherings and operations of multiple sectors. In January 2021, the South African government announced its vaccination rollout strategy for South Africa. With an increase in the supply of the COVID-19 vaccine, more countries within the Southern African regions started getting access to vaccines and are following their vaccination rollout programs. The cumulative number of fully vaccinated people as of 30 September 2021 in South Africa was 8,819,130, which represents 15% of the total population. The F&O team was instrumental in keeping SAEP staff informed of any developments during the vaccine rollout program so that team members could make an informed decision on getting vaccinated.

The government of South Africa deems it necessary to maintain the country under the COVID-19 National State of Disaster and requires organizations to allow employees who can perform their duties outside of the office to continue working remotely. Prospects of organizations being fully functional and having more staff return to the workplace are contingent on more people getting vaccinated and the country maintaining a reduction in daily infection numbers. While it is expected that the SAEP Pretoria office will reopen in Year 5, SAEP will take a gradual and conservative approach in allowing staff to return to the office, on a voluntary basis. SAEP will implement the SAEP Return to Office Plan, which outlines prevention and protection measures and guidelines according to South African government regulations. Furthermore, the F&O team worked with the Deloitte Home Office team to update the SAEP Deployment Guide for Deloitte practitioners that may in the future travel to Southern Africa.

3.2.1 FINANCE AND STATUTORY REPORTING

In Year 4, the SAEP Finance team:

- Finalized and submitted all project VAT returns, responded to audit questions raised by SARS and received all monthly refunds up to July 2021. There is an ongoing SARS audit of the VAT submission for August and September 2021, which should be concluded in the first quarter of Year 5
- Submitted all pay-as-you-earn (PAYE) returns for the year and processed payments to SARS
- Renewed the exemption of Regulation 3 1 (c) with the South African Reserve Bank to allow Deloitte Consulting Overseas Projects LLC (South Africa) to make subcontract payments on behalf of Deloitte Consulting LLP (USA) for the next 12 months and included the new subcontractor, EWT, as one of the approved payment recipients
- Completed the annual external audit for FY20 on 18 March 2021 and received an unqualified audit. The management report has been shared with SAEP senior management

3.2.2 PROJECT STAFFING

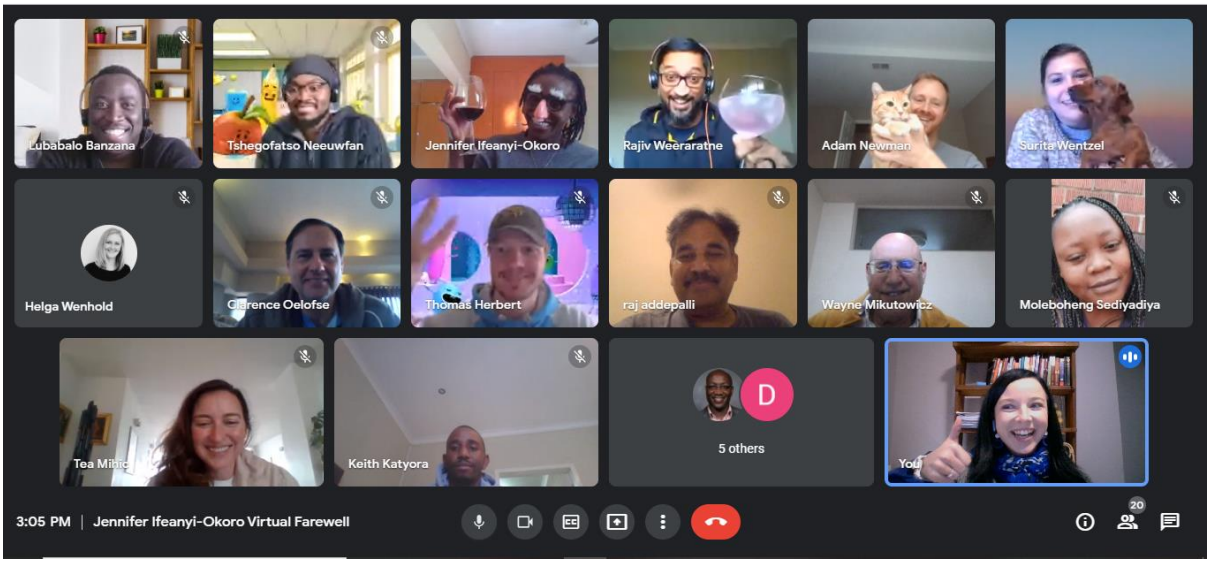


Figure 20: The SAEP team bids farewell to DCOP-T, Jennifer Ifeanyi-Okoro, in June 2021.

SAEP's Deputy Chief of Party-Technical (DCOP-T), Jennifer Ifeanyi-Okoro, left the Program to take on the Head of Technical Assistance role at the International Renewable Energy Agency (IRENA) in the United Arab Emirates. Tshegofatso Neeuwfan was appointed as SAEP's new DCOP-T on 26 September 2021. Cole Johnson (former Off-Grid Team Lead) took over as Program Manager from Adam Newman in June of 2021. Adam Newman, who functioned in the role of interim DCOP-T will continue working at SAEP as Senior Technical Advisor.

Deloitte identified and mobilized required resources to support the service delivery of SAEP. Please refer to Appendix I for the Deloitte SAEP Organizational Chart. In Year 4, the following program staff joined SAEP:

- Mr. Razanadratefa Zotonantenaina as the Grants Officer in Madagascar on 18 January 2021
- Mr. Henri Randriamanana as the Country Manager of Madagascar on 22 January 2021
- Ms. Sibulele Dlova as the South Africa Technical Energy Specialist on 17 June 2021
- Ms. Nachi Majoe as the OC5 Training and Capacity Building Team Lead on 2 August 2021
- Ms. Anna Oluyomi as Engagement Coordinator on 1 March 2021
- Ms. Margot Frank as Operations Manager on 1 July 2021

3.2.3 SUBCONTRACTING

SAEP continued to engage the following subcontractors to provide technical assistance, advisory support, and capacity development:

- **CrossBoundary:** CrossBoundary provides transaction advisory support and designs go-to-market strategies across Africa for SHS and mini-grid providers and investors. In Year 4, CrossBoundary continued its vital support to the Government of Malawi to advance the Mpatamanga transaction and to financial close. A new firm-fixed price task order was issued to Cross Boundary. Under this task order, CrossBoundary provided targeted transaction support to SunElex, a South African IPP. This support included developing a bespoke financial model, which SunElex can use for its proposed two-phase "solar plus storage" projects in South Africa. A subcontract ceiling increase was processed for CrossBoundary based on USAID's approval of the advanced notification.

This ceiling increase and new task order (10) enables CrossBoundary to continue to support the Government of Malawi with the Mpatamanga Hydropower Project as transaction advisors.

- **Endangered Wildlife Trust (EWT):** EWT provides services helping utilities to reduce the negative effects of electrical infrastructure on wildlife through wildlife-friendly development management. EWT is a South African non-profit organization that has supported other Power Africa projects in mitigating the damage to wildlife from electricity infrastructure. In Year 4, SAEP fully executed a firm-fixed price subcontract with EWT to do work with utilities in Angola, Malawi and Mozambique.

- **Consultec:** Consultec is a Mozambican firm that provides engineering and environmental consulting services. In Year 4, a contract modification was processed internally for Consultec to obligate additional funding to the subcontract, within the overall subcontract ceiling. A subsequent contract modification was processed to increase the ceiling and funding of the subcontract and to extend the period of performance of the subcontractor.

- **Deloitte South Africa:** Deloitte South Africa provides professional and administrative personnel to support project implementation in many areas of key delivery. In Year 4, Deloitte South Africa provided localized expertise surrounding regional alliance and partnership building, energy infrastructure, transaction advisory and project operations in the region, with a particular focus on Angola, Mozambique and South Africa. A contract modification was processed internally for Deloitte South Africa to obligate additional funding to the subcontract, within the overall subcontract ceiling, and to realign billing rate cards back to USD for Malawi and Mozambique.

- **Strategic International Advisory (SIAL):** SIAL provides specialist utilities and infrastructure advisory services. In Year 4, SAEP issued an Authorization to Proceed (ATP) to SIAL Consulting to commence support to Power Market Ltd. (PML) with operational and resource planning in Malawi. A new task order was processed for SIAL in August of 2021. A modification to SIAL's new task order was processed in September 2021 to extend the subcontractor's period of performance.

- **Council for Scientific and Industrial Research (CSIR)**: The CSIR is South Africa's premier research and development center. In the beginning of Year 4, CSIR assisted ESCOM to improve its capacity to manage the integration of grid-scale renewable power assets into the national grid.

- **Engage Energy and Engineering**: A new subcontract was issued for Engage Energy and Engineering in February 2021. Engage is a South African engineering firm specializing in improvement of industrial processes through efficiency engineering. In Year 4, Engage assisted EWSC in Eswatini and LWSC in Zambia in designing an energy efficiency program that enables the utilities to deliver water with a reduced electricity demand. The resulting reductions in electricity costs will help reduce the pressure on user tariffs, while enhancing the quality of services. Two modifications were executed to Engage's subcontract to extend the subcontractor's period of performance.

- **Geometric Talks:** Geometric Talks is a Portuguese engineering firm. In Year 4, Geometric Talks provided transmission and substation engineering assistance to assist RNT in implementing the 400-kV transmission line project in Angola. The subcontractor initiated and helped advance the procurement of an Owner's Engineer. SAEP processed two modifications to the Geometric Talks subcontract in Year 4. The first was processed in the third quarter of 2020 to adjust the new working environment due to COVID-19 regulations. The subsequent modification, processed in September 2021, extended the subcontractor's period of performance, reduced the subcontract ceiling, and increased funding to the subcontract.

- **Fluxx:** Fluxx provides key software support in managing SAEP's grants management information system and thus automating the entire program. In February 2021, a modification to Fluxx's subcontract was executed to revise the monthly payment amount for Fluxx services as well as update the subcontract ceiling and funding amount to align with the new estimated fixed price amount.

See Appendix H for a comprehensive list of resources mobilized for short-term technical assistance.

3.2.4 PROCUREMENT

SAEP continued to follow best practice through the implementation of efficient procurement processes. Key procurement initiatives during Year 4 include the following:

- Procured a service provider for English to Portuguese translation services for technical delivery in Angola
- Procured English to French translation and interpretation services leading up to and during the Madagascar Mini-Grid Development Grant Winners' Announcement event, including subsequent translation of Fluxx training material for the grantees. The event included procuring services of a video production company to host the event as well as to develop a video to be incorporated into the live event proceedings
- Provided support to the RTS Botswana event for catering and printing of manuals
- Contracted a video production company to produce a three-minute video about SAEP's support to the off-grid sector in Malawi. The video highlighted how SAEP interventions have resulted in increased energy access and the economic development of the SHS industry in Malawi
- Contracted a video production company to produce a three-minute video highlighting SAEP activities and the Program's achievements
- SAEP contracted a production company to produce a three-minute video highlighting SAEP's activities in Angola by interviewing RNT PIU staff. The SOW included capturing video footage and photographs of urban and rural Angola (Luanda surrounds) displaying electricity infrastructure as well as areas lacking electricity. The service provider has been able to provide over 60 high resolution photos of energy infrastructure and energy-related images. RNT requested that production of the overview video be paused given COVID-19 restrictions in Angola and thus the video will not be completed until conditions improve
- SAEP contracted a service provider to assist with simultaneous French and Portuguese interpretation during a virtual workshop hosted by SADC on 29 June 2021

3.2.5 GRANTS

Solar Home System Kick-Starter Program for Malawi

To improve access to electricity across Malawi, SAEP awarded USD $2 million in results-based grant funding (RBF) to four SHS companies in July 2019. Through the SHS Kick-Starter Program for Malawi, the awardees – SolarWorks!, VITALITE, Yellow and Zuwa Energy – have been able to connect 90,715 households to electricity by the end of September 2021 with a total of USD $1,252,659.00 in grant funds disbursed over the period.

The use of USAID and Power Africa's RBF enabled the SHS companies to access an additional USD $5 million in structured working capital from private financiers and a further USD $3.5 million will be released when the SHS companies raise additional equity funding. In Year 4, the grantees' sales numbers were decreasing due to the COVID-19 pandemic. As such, the grant agreement has been modified and extended to December 2021 to give the grantees more time to reach their sales targets.

During Year 4, the off-grid team provided technical and capacity building assistance to the grantees by continuing SFE trainings to develop the skills of sales agents and sales managers. The grantees also benefited by utilizing SAEP's RTM tool to strategize the expansion of their sales network and maximize sales.

As part of the grant agreement, the SHS companies are required to submit a quarterly milestone report that details their sales made vs. sales targets. The M&E team, Grants Manager and relevant off-grid technical team members reviewed and approved these milestone reports before releasing payments. All milestone data submitted needs to be verified against the attached CRM data extract for each grantee. This verification process was conducted every quarter and will continue until the end of the grant program.

In addition, the SAEP PMO M&E team conducted data verification exercises (DQAs) with the SHS Kick-Starter grant winners SolarWorks! VITALITE, Yellow and Zuwa Energy as well as with another SHS company, Green Impact Technologies, based in Malawi. The objective of the exercise was to verify whether the actual systems/products that are being sold by the grantees meet all the technical requirements as stipulated in their grant agreements.

Refer to the PMO Program Performance Management Section (3.1.3) of this report for more details on the DQAs conducted

Yellow sold a total of 67,458 SHS between July 2019 and June 2021 thereby achieving its target under the grant. All administrative closeout processes for its grant agreement have been finalized. The other three grantees are yet to reach their targets.

Madagascar Mini-Grid Development Grant

To contribute to the Government of Madagascar's target to achieve an electricity access rate of 70% by 2030, SAEP launched the Power Africa Madagascar Mini-Grid Development Grant in November 2020. The grant is intended to support mini-grid developers who have obtained concessions from Agence de Développement de l'Électrification Rurale (ADER) to build mini-grids but are unable to source funding to reach FC, while developers with existing mini-grids are expected to use the grant to fund the infrastructure required to connect additional households to the grid.

To kick off this activity, SAEP successfully hosted the Madagascar Mini-Grid Grant Winners' Announcement virtual event on 23 November 2020, with the attendance of the U.S. Ambassador to Madagascar, Madagascar Minister of Energy and Power Africa Coordinator. The event was hosted in French with simultaneous English interpretation. SAEP finalized and executed grant agreements with Autarsys Madagascar SARL, Henri Fraise Fils & Cie (HFF), and *Hydro Ingenerate Etudes Et Realisations* (HIER), totaling to just over USD $1.3 million.

To promote grant compliance, the SAEP grants team conducted in-depth training for all grantees on how to complete and submit progress and financial reports on the Fluxx grants portal. The training took place from 30 November to 1 December 2020.

HFF plans to build a new solar mini-grid at Manaratsandry village. There have been some challenges with this company as it has not been submitting reports on time and is often unresponsive to SAEP's communication and requests. Subsequently, SAEP shared a letter with HFF to remind the company of its obligations as agreed to in the signed grant agreement.

HFF responded to SAEP on 23 March 2021, indicating it is still committed to the project and has been going through some reorganization due to COVID-19 impacts. Through additional interventions from the USAID/Madagascar mission, HFF has submitted progress reports for June and September 2021. Based on these reports, HFF has indicated a delay to their overall schedule due to risks associated with i) receiving approvals from ADER for their final tariff, and ii) receiving local authorities' approval of the final mini-grid site. HFF also flagged a cost increase since they now must find alternative land for a sports field to replace the land they are using for their plant. While USD $315,000 worth of funding has been obligated to this grant, no funds have been disbursed to date.

Autarsys received equipment to construct a hybrid solar mini grid with battery storage in Edjeda in April 2021. This grantee has also flagged supply chain issues due to shipping delays that will affect the overall project schedule. SAEP is also tracking their metering implementation which is an in-house approach. While USD $310,312 worth of funding has been obligated to this grant, only USD $128,267 of funds have been disbursed to date.

HIER received equipment to extend the distribution network of the 560-kW hydro-powered mini-grid in the Municipality of Tsarazaza in August 2021, however, the company is facing customs clearance issues of this equipment due to the sudden change in the clearance procedure at the level of the Ministry of Economy and Finance on projects dedicated to rural electrification as of June 2021. SAEP and the USAID/Madagascar mission are coordinating with the company to help navigate a resolution to this issue with the Ministry of Energy and Hydrocarbons (MEH) and the Ministry of Economy and Finance (MEF). While USD $682,596 worth of funding has been obligated to this grant, no funds have been disbursed to date due to the delay caused by the unexpected change in customs clearance procedure for equipment earmarked for rural electrification.

3.2.6 SAEP TRAVEL

Year 4 in South Africa, specifically, started on an alert level 1, which allowed for reopening of international borders for the purposes of trading and allowing local businesses to continue operations under COVID-19 regulations. At that point, airline operations were limited with restrictions in place, as South Africa has been on a "red" list for many countries. In December 2020, South Africa moved into an advanced level 3 lockdown due to the resurgence of COVID-19, which meant that South Africa had entered a second wave of infections. In May 2021, South Africa moved to an advanced level 4 lockdown as the third wave, driven by the Delta variant, drove infection rates significantly higher than the prior two peaks. The newly reported cases further impacted travel and resulted in several countries imposing additional travel restrictions to and from South Africa. Due to the unprecedented, long-lasting lockdown, no international or regional travel took place on the project during January to March 2021.

In the months of April to June 2021, program travel activities resumed in the region. The travel application process required intensive scrutiny of the need to travel as well at the importance for these visits and in-person meetings to take place. During the months of June to July 2021, South Africa had moved into an adjusted alert level 4 due to a third wave of the COVID-19 virus. The alert level had placed more restrictions on the movement of citizens by closing provincial borders, adjusting nighttime curfew from 21h00 to 04h00 and closing schools. On 30 September 2021, South Africa was placed on adjusted alert level 1, effective from 1 October 2021.

With South Africa moving to adjusted alert level 1, it is expected that travel restriction will be more relaxed, with the hope of the country being removed of the "red" list for many countries. South Africa's vaccination program has been making progress, which is slowly allowing for more countries to lift travel restrictions against South Africa.

The project logistics team continues to keep in regular contact with the travel agent monitoring the situation and expect that a limited amount of regional travel will commence in the coming months.

See Appendix H for details on specific SAEP team travel between 1 July 2021 and 30 September 2021.

3.3 CHALLENGES AND RISKS

During Year 4, SAEP encountered several significant challenges. SAEP continuously tracked these issues and mitigated much of their associated risk. The Program will continue to consider potential challenges and risks in Year 5.

Challenges:

- **Coronavirus Pandemic**. The coronavirus outbreak and resulting lockdown and travel restrictions impacted SAEP program delivery and expected outcomes. The SAEP team has been teleworking since March 2020. Similar measures were imposed in many other countries in the region and the ability to engage with counterparts is limited as a result. Despite lockdowns and having to adapt to different ways of work, SAEP continues to advance electricity reform activities and support counterparts, minimizing disruptions as much possible while also working to design new activities to help the sector respond to the pandemic. SAEP has still been able to have some meetings in person at the end of the year in Angola, Mozambique and Malawi, using local staff and some limited travel. SAEP is hopeful that there will be continued opening up of the region in Year 5.

- **Limited Connections Opportunities in the Region to Realize Connections Targets**. While electrification rates continue to be low in some countries in Southern Africa, the capital must be available with programs focused on electrification for new connections to occur. SAEP is working with most of the grid extension programs in the region as well as supporting off-grid electrification opportunities; however, the potential connections numbers are still falling short of the Program's 3 million target. SAEP is working to identify and support additional prospects, but there are limits to the opportunities and the connections figures associated. In some cases, there are electrification programs, but an unwillingness by counterparts to let SAEP support, such as in Malawi.

- **Lesotho LEC Non-responsiveness**. Since 2020, the LEC leadership underwent several changes. SAEP has reached out to each new LEC head, firstly to the Acting MD, Dr. Leketekete Ketso and, recently to the new MD, Mr. Mohato Seleke, who has been appointed on a five-year contract with LEC. At this stage, as LEC has yet to respond, it is not clear whether the LEC strategic plan developed with SAEP's support in 2019 is still in effect in some form or whether it has been replaced with a new strategic plan due to the changes in leadership.

- **Outcome 5 Lead Transition**. Due to family needs, the SAEP Outcome (OC) 5 Lead had to leave the program the beginning of June 2021, leaving a vacancy in the Increased Human and Institutional Capacity work stream. This has meant a slightly slower delivery of activities as SAEP recruited a new person for the position. The new OC5 Lead started in August 2021.

- **RNT Resource and Capacity Challenges**. The RNT PIU continued to be under-resourced, where none of the staff work full time on the transmission project. In addition, there are technology challenges where some of the staff do not have laptops or necessary equipment.

The language barrier also causes verbal and written communication difficulties. All AfDB reporting must be in English; however, very few RNT PIU staff speak or are proficient in English. These challenges make it difficult for the RNT PIU to complete AfDB requirements causing delays and risks for SAEP in providing technical assistance. However, with the Procurement Plan approved in June 2021, the acquisition of IT equipment (and software) and translation services is underway. The AfDB also approved the hiring of five individual consultants who will provide hands-on support to the RNT PIU. Recruitment of the Gender and Social, Environmental, Financial Management and Procurement Specialists are in the final stages; the Project Manager hiring process will begin in Year 5.

- **Delays in Financial Closure of Projects.** Several projects experienced delays on procurement- and environment-related activities. Bidders have challenges receiving information from manufacturers and sub-contractors due to COVID-19 restrictions and bid submission deadlines have had to be postponed. While SAEP started to see more movement in Year 4, there are still continued challenges from COVID-19.

- **SHS Supply Chain Challenges**. The SHS companies awarded under the Malawi SHS Kick-Pearter Program have faced supply chain challenges by struggling to source products to the Malawi market given the broader COVID-19 pandemic supply chain disruptions and delays. This has meant delays in products reaching Malawi and increased costs for the transport. For some of the SHS grantees this has meant lower sales volumes.

- **Slow Progress for the Madagascar Mini-Grid Development Grant**. The Madagascar Mini-Grid Development Grant has gotten off to a slow start as Madagascar was significantly affected by the COVID-19 pandemic. It is expected that the project will need to extend the period of performance of the grant, beyond the currently approved 31 January 2022 to enable the grantees to conclude the construction of the various mini-grids. Further challenges included one grantee's non-responsiveness to SAEP's communications and one company facing customs clearance issues for the supply of equipment. SAEP will continue to monitor progress and assist the grantees to overcome the challenges they face.

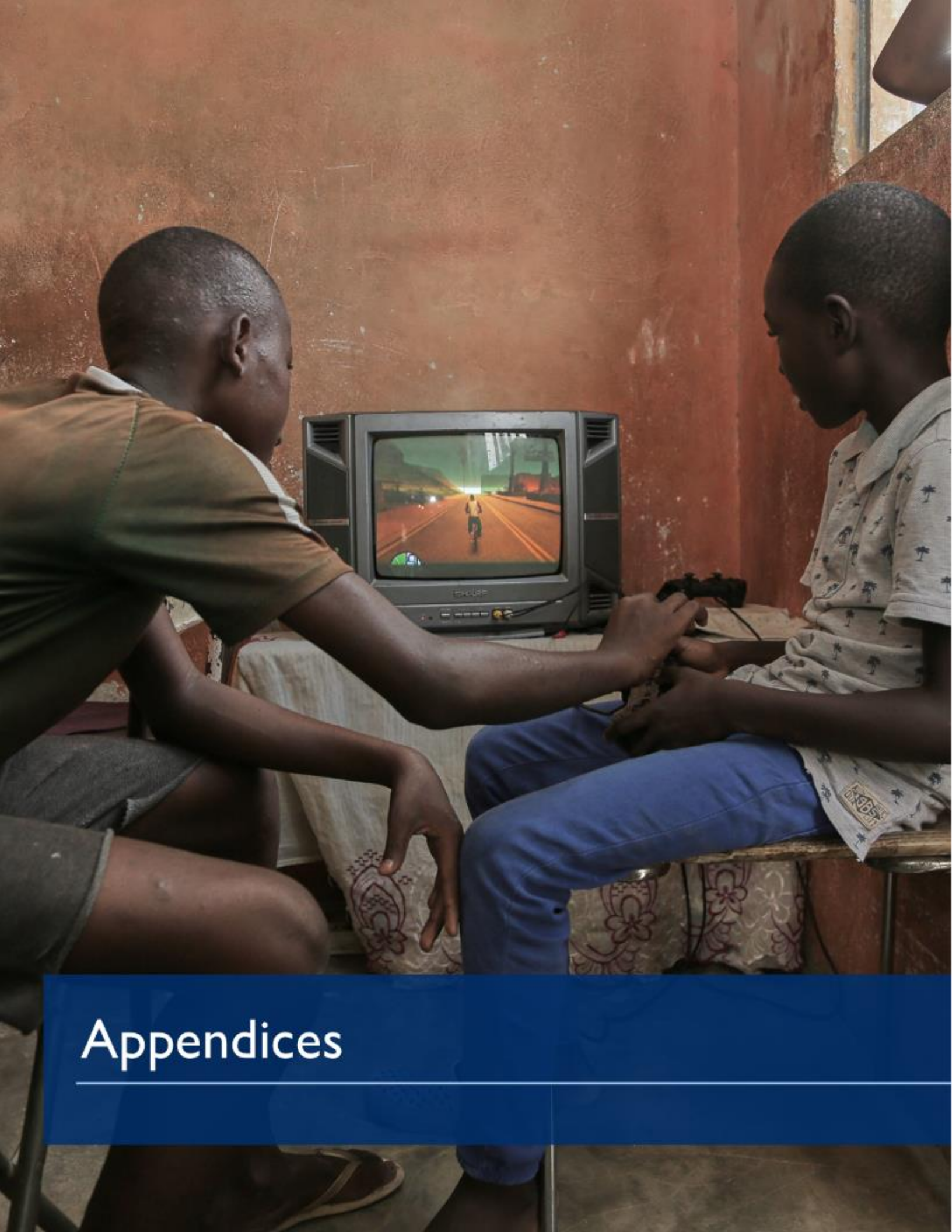
Ongoing Risks:

- **COVID-19 Lockdowns.** By the end of Year 4, most Southern African countries had lifted lockdowns and travel restrictions. However, the possibility of an increase in new infections remains and could again impact activity planning and implementation in Year 5 should lockdowns be re-implemented.

- **Electoral and Political Transitions.** Throughout the life of this project, Southern African countries have experienced and will continue to experience political transitions following elections. The change in government in Malawi in June 2020, led to some challenges for SAEP's work in Malawi in Year 4, such as the transfers of key points of contact from the Department of Energy Affairs to other ministries and the absence of a clear government decision on establishing an independent single buyer (Power Market Limited). The delays in appointing CEOs and other directors at ESCOM and the Malawi Energy Regulatory Authority (MERA) were affecting strategic decision-making processes. A series of ongoing protests in Eswatini against the monarchy and for democratization began in late June 2021.

This delayed SAEP's activity with the EWSC; however, by the end of Year 4, relative calm had been restored in the country and SAEP was on track with the EWSC activity. Zambia had general elections in August 2021, which were peaceful and led to a change in government. The new government has indicated that they will be supportive of the participation of the private sector and ZESCO in the development of renewable energy. In Year 5, Angola will have a general election, which could impact the Program's work with the country's distribution and transmission companies. SAEP can only succeed with support from high-level government officials. This means that following changes in governmental composition post-election, SAEP will need to build new relationships with successor government officials. In order to promote continuity of government support for SAEP throughout and after government transitions, the SAEP team continues to focus on building broad, non-partisan governmental relationships in host countries and gaining unified support for energy sector reform and delivery of activities that are not as influenced by political outcomes.

- **Global Market Fluctuations and Regional Interdependencies.** Prices of energy commodities are often affected by global market fluctuations. Likewise, national energy systems naturally have regional interdependencies as it pertains to imports, exports, and transportation networks. Because of this, each Southern African nation is somewhat constrained by trends and events impacted by external factors. To mitigate this constraint, SAEP will incorporate market research and trend analysis to stay abreast of global energy market developments and changes. SAEP will also focus on regional community engagement and coalition building to unite Southern African nations in energy sector reform and coordination where possible. The SAEP team will also monitor interdependencies that can affect the success of the Program. One major area where the global and local markets have played an impact has been on the overall economic slowdown due to COVID-19 that has resulted in oil prices being reduced which has financial sustainability impact for the Angolan government and has negatively affected currencies in countries such as Zambia. Zambia's currency devaluation is influenced by long-standing high debt levels and COVID-19 has exacerbated the challenge.



Appendices

APPENDIX A SAEP YEAR 4 SUCCESS STORIES

Quarter 1: October – December 2020

USAID/Power Africa Grant Program Supports Solar Home System Companies to Connect Thousands of Malawians to Electricity

"*I use candles or paraffin lamps for lighting. This makes it difficult for my children to do their homework at night,*" says Chrissy Kasawe who lives in Chalendewa village in Malawi. Living without electricity is the reality of approximately 85 percent of Malawian households. Energy supply has been a growing concern in in the country. Economic growth and development crucially depend on the long-term availability of energy from sources that are affordable and accessible. To accelerate access to electricity, the USAID Southern Africa Energy Program (SAEP), a Power Africa initiative, launched the Solar Home System (SHS) Kick-Starter Program for Malawi in July 2019. The Program awarded a total of USD $2 million of results-based grant funding to four SHS companies: SolarWorks!, VITALITE, Yellow and Zuwa Energy. By December 2020, the four companies had connected nearly 58,000 households to electricity.

Why SHS?

The SHS solution is an off-grid electrification method that is flexible, easy to deploy and affordable by the poorer population segments. A typical system comprises a solar panel, battery, radio and light bulbs. By placing the panel in sunlight during the day, the solar energy can be stored (in a small battery) and then used to power lights and small appliances[15], thereby providing electricity access to the household. SHS can be rolled out quickly, making it an attractive solution for electrification, particularly in rural and sparsely populated areas.

Most SHSs have small radio and mobile phone charging devices that are powered by a solar panel and battery. Photo credit: USAID SAEP

The Malawian SHS market has been slow to mature, with only a few companies active in the country. To unlock the potential of the off-grid sector, SAEP launched the SHS Kick-Starter Program, providing financial assistance and operational support to private sector SHS companies up to June 2021 to help them scale operations and sales in rural and urban communities.

The Journey So Far

SAEP tailored its support for each company based on their respective needs and through ongoing consultation with the companies. The grant program commenced with SAEP providing project management skills training to VITALITE and SolarWorks! while support to Zuwa Energy and Yellow consisted of business operations planning. In 2020, the main focus was on sales force effectiveness training and on building companies' capacity to design strategies for the recruitment and retention of sales agents.

SAEP also trained the companies to use a route-to-market geospatial tool, adapted to the Malawian market. Developed by SAEP, the tool assists companies to formulate strategies for scaling operations while optimizing return on sales.

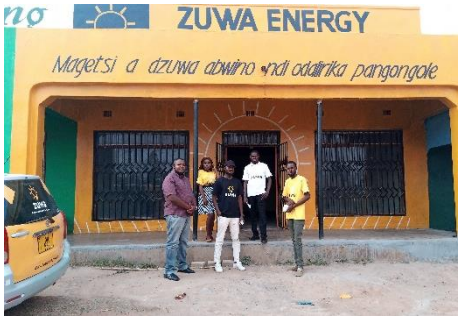
> ***"So far the supervisors and managers who received the sales training have found it very useful and are already adopting and implementing some ideas from the training around sales pitching, sales planning, agent recruitment and agent motivation."***
> *Mr. Jones Ntaukira, Chief Executive Officer, Zuwa Energy*

[14] Previous divider photo: Two children playing video games in a residence in Vila Flor, Luanda, Angola Photo: USAID SAEP
[15] The size and number of appliances that SHS include depends on the size of the panels and batteries.

Throughout the grant period, the companies submitted quarterly milestone reports to SAEP highlighting successes and challenges and reporting the quarterly SHS sales figures. On submission of these reports, SAEP disbursed funds to the participating companies.

Since 2019, the companies have expanded business operations and widened their distribution networks, reaching remote areas in Malawi that previously had no access to electricity. Some **highlights** that have contributed to an increase in SHS sales and connections:

- **Business expansion:** SolarWorks! established its main office and warehouse in Lilongwe and now has a total of six operational shops. VITALITE became more established in the central region where they opened up three sales and service centers. Yellow opened a new office in Blantyre (first office was in Lilongwe); this has allowed the company to recruit agents and sell units in the southern region. Zuwa was able to open four new shops, including one that caters for the large unelectrified population in Mchinji District located 100 kilometers west of Lilongwe and bordering Zambia. The companies also recruited full-time staff members and established dedicated operational teams to support distribution networks across the country.



One of Zuwa's new shops. Photo credit: Zuwa Energy

- **Sales agent recruitment and skills development:** In total, the companies deploy around 700 sales agents across the country. The growth in the number of sales agents not only increases companies' reach and sales, but also enhances the livelihoods of local agents by increasing their earnings. Through SAEP's sales force effectiveness training, companies have focused on extending sales knowledge and skills to their agents.
- **Marketing and product innovation:** The companies regularly conduct product demonstrations and promotions, as well as community outreach activities to explain the benefits of SHS. Additionally, all companies have active social media platforms where new products, successes and vacancies are published. Some grantees also launched innovative products like solar television systems and smartphones as part of their product range to help underserved communities enter the digital world.
  Partnerships: Through the growth of their businesses, some SHS companies established key partnerships with mobile service providers like Airtel Money and Telekom Networks Malawi to collect monthly instalments through mobile payments, and this makes it easier for customers to pay their monthly bills. Zuwa entered into a partnership with the Malawian post office that entails using existing post offices in rural and peri-urban areas as points of sales.

SolarWorks! has added solar TVs to its product offering. Photo credit: SolarWorks!

The onset of the coronavirus pandemic in March 2020 had a negative impact on operations and sales. The grantees were not able to continue with business as usual; shops had to be closed, door-to-door sales were limited and access to stock ordered from across borders was delayed. Taking into account the impact of COVID-19 on SHS companies, SAEP modified the SHS Kick-Starter grant milestones and disbursement schedule to include the submission of a business continuity report, which triggered a disbursement of funding, to ease the SHS companies' liquidity constraints. Additionally, SAEP provided updates to SHS companies on the limited relief funding opportunities available to support business continuity during this time.

The Impact
The SHS Kick-Starter Program is enabling SHS companies to strategize, expand operations, recruit and retain sales agents, and increase household connections to electricity in Malawi. One of the almost 58,000 connections achieved so far is that of VITALITE customer, Chrissy Kasawe: "*Ever since I was introduced to solar, I am very happy as my children are now able to get their homework done and study even at night. Also, I am able to charge my phone and listen to the radio at any given time together with my family*."

The core objective of SAEP's support is sustainability. SAEP's training focuses on enhancing the skills of the companies' trainers in order to encourage continuous skills development amongst the companies' staff. The SHS Kick-Starter will continue to have life-changing impacts beyond the three-year grant period by improving the living standards of rural households and enabling income generating activities for communities in Malawi.

USAID Helps Three Southern African Utilities Connect Over Half a Million New Customers to Electricity

Electric utilities have a critical role to play in the growth of the power sector and the economic development of Southern Africa. A well-managed and financially viable utility is vital to increasing generation, transmission and distribution capacity and connecting new customers. Utilities in the region have been struggling to meet their existing and prospective connection targets. This has been exacerbated in some cases by their respective governments' aggressive plans to increase electrification and access over the next decade and beyond. To meet these targets in a sustainable way, utilities must focus efforts on improved project finance and management skills and processes, more efficient procurement practices, and proactive customer engagement and management, which will reduce losses, improve revenues and successfully connect more customers to electricity.

To help utilities in Southern Africa confront challenges across their value chains, the USAID Southern Africa Energy Program (SAEP), a Power Africa initiative, works hand-in-hand with utilities to address:

- **Growth**: delivering electricity to consumers through transmission and distribution expansion and connection programs
- **Performance**: adopting monitoring and evaluation performance tools
- **Transformation**: focusing on improving utility planning processes and management by developing strategic plans and implementing innovative approaches

SAEP's focus on transferring skills and knowledge to utilities is key for development, self-reliance and sustainability. The following projects illustrate how SAEP is helping improve utilities' approaches and capacities to decrease commercial losses, improve human capital and connect new households and businesses to electricity.

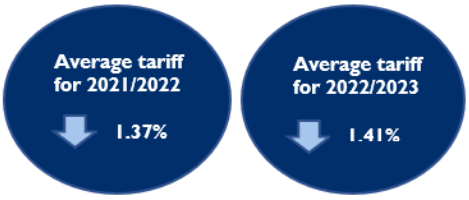
	Empresa Nacional de Distribuição de Electricidade (ENDE), Angola	Lesotho Electricity Company (LEC), Lesotho	*Electricidade de Moçambique* (EDM), Mozambique
The Challenge	In 2019, Angola's distribution company, ENDE, had 1.8 million customers across 18 distribution centers, yet only 600,000 customers are connected to paid electric meters with remaining customers billed based on monthly average consumption. To assist	The appointment of a new board of directors and senior management team in 2018, as well as a need to bring an external perspective into the organization's strategy formulation, prompted the LEC to request SAEP's assistance in building a five-year strategic plan	The Government of Mozambique has set an ambitious electrification target of a 100 percent electrification rate by 2030. National utility, EDM, mandated with the achievement of this target, is looking at better ways to manage the national electrification program

	Empresa Nacional de Distribuição de Electricidade (ENDE), Angola	Lesotho Electricity Company (LEC), Lesotho	*Electricidade de Moçambique* (EDM), Mozambique
	Angola in reaching its 60 percent electrification target by 2025, the African Development Bank (AfDB) announced a multimillion-dollar loan to ENDE for the rollout of a prepaid metering program.	that would improve the utility's performance and help it to hit its goals.	and to "connect" with its existing and potential customers by establishing an electrification management unit (EMU) and improving customer management.
The Approach	To help ENDE develop and implement internal systems and processes required to install over 1.2 million prepaid meters under the AfDB's energy program, SAEP assisted ENDE in the **design and set-up of a Project Implementation Unit** (PIU). The PIU manages all aspects of the program, including the procurement and installation of prepaid meters and supporting infrastructure. SAEP is working with the ENDE PIU by providing **technical advisory services and on-the-job training to prepare the required tender packages** and will support ENDE in evaluating tender submissions. Additionally, SAEP is assisting ENDE in support of the World Bank Electricity Sector Improvement Project Assisting to prepare tender documents and review bids for the installation of 7,000 smart meters to high value customers. Given the breadth of these programs, SAEP plans to operationalize an electrification coordination unit to **improve electrification planning and management** and implementation.	SAEP worked with the LEC to **develop an updated strategic plan** that includes initiatives with budgets and direct linkages to the company's fiscal strength, directing funding to achievable priority projects. To assist in the successful **implementation of the plan**, SAEP worked with the LEC to develop executive compacts, which are formal performance agreements between executives and the board, reviewed the LEC executive structure, and developed a process for the revision of the remainder of the structure, which had been in a transitional stage since 2016. Since the adoption of the strategic plan, the executive team has focused funding on achievable priority projects.	SAEP cooperated with EDM to **design, set up and operationalize the EMU**. The EMU supports the management, planning and implementation of the electrification program in a cost-efficient and sustainable manner. The EMU has successfully adopted processes and procedures developed by SAEP regarding planning, project management, financial management and procurement. SAEP is also working with EDM to **implement a human-centered design (HCD) approach to increase customer centricity** and support new connections. EDM identified three key focus areas based on the HCD process to improve customer engagement. These solutions have been developed into an implementation roadmap and will be rolled out in mid-2021. Read more on the HCD process **here**.
The Impact	SAEP's support and technical assistance contributed to EDM, ENDE and the LEC connecting almost **570,000 households and businesses** to electricity between March 2019 and December 2020, with another 600,000 connections expected by December 2021.		

Quarter 2: January – March 2021

Relief for Eswatini Electricity Consumers as Electricity Tariffs Decrease

The Eswatini Electricity Regulatory Authority (ESERA) will save Eswatini electricity consumers around USD $44 million over the next two years, thanks to support received from the USAID Southern Africa Energy Program (SAEP), a Power Africa initiative. Instead of having an average 7.61 percent tariff increase in each of the financial years 2021/2022 and 2022/2023, the average tariff will be reduced by 1.37 percent in 2021/2022 and by 1.41 percent in 2022/2023.



Tariff reviews do not always result in increases. When a country's economic circumstances justify it, regulators can decrease tariffs. Setting cost-reflective tariffs is critical as it helps to ensure that consumers always pay the fair price of electricity. On 30 October 2020, the Eswatini Electricity Company (EEC) filed its application for a change in tariffs. The EEC sought revenues of just over USD $175 million for the financial year 2021/2022 and USD $201 million for 2022/2023. This compares to the base year (2020/21) amount of USD $163 million.

The importance of a rate case for regulators

The responsibility of a regulator in a rate case cannot be overstated. The regulator must ensure that the utility receives tariffs sufficient to cover reasonable costs plus a reasonable return on its invested capital, while paying attention to affordability issues for consumers. By managing these competing interests, regulators can move utilities towards creditworthiness without government guarantees. This type of financial stability will allow utilities to increase their capacity to serve customers either through generation expansion or through purchasing power from independent power producers.

SAEP's support to ESERA

ESERA requested SAEP's support in evaluating certain parts of the tariff application to achieve the balance of interests. SAEP's assistance included determining the regulatory asset base, the weighted average cost of capital, and manpower costs, among other items.

On 1 February 2021, ESERA issued its decision in the matter adopting several of SAEP's recommendations and the new tariffs became effective on 1 April 2021. ESERA authorized tariffs that would result in a revenue requirement of USD $154 million in 2021/22 and USD $174 million in 2022/23. The authorized amounts were approximately USD $21 million and USD $23 million less than the requested amounts.

"The Authority would like to extend appreciation to the USAID Southern Africa Energy Program for the assistance and guidance provided during the tariff review, as well as the level of commitment and professionalism with which it was delivered" – Vusumuzi Mkhumumane, ESERA CEO

In its final decision, ESERA adopted SAEP recommendations for a 10 percent reduction in the regulatory asset base, a reduction in the weighted average cost of capital from 7.92 percent to 7.28 percent, and the imposition of a 1 percent productivity factor on wage and salary expenses. Following guidance from SAEP, ESERA also did not allow depreciation expense on non-utility-funded assets which on its own saved Eswatini ratepayers USD $5.1 million.

Other recommendations made by SAEP and adopted by ESERA in its decision were to require the EEC to conduct a Manpower Study to determine appropriate staffing levels for the company and to also conduct a study to determine the proper debt-equity ratio.

The impact of lower tariffs
The tariff decreases have allowed ESERA to begin to make adjustments in the amounts that business customers pay for electricity. Historically, business customers have paid more than their true cost of service and have subsidized domestic customers' electricity bills. A tariff decrease gives ESERA some flexibility to rebalance the rates paid by both classes of customers so that the probability of business customers leaving the grid and generating their own electricity is reduced.

Upon completion of the rate case evaluation, ESERA took the opportunity to extend appreciation to SAEP. SAEP support to ESERA continues as SAEP have been requested to review that EEC connection charges follow ESERA policy. Customers in Eswatini, during the public meetings on the tariff application voiced concern that connection charges were difficult to understand and the method used to calculate them was not transparent. SAEP's support in remedying this situation in Eswatini may prove to have applicability to the wider Southern Africa region.

Quarter 3: April – June 2021

Mozambique's Temane Transmission Project gets the green light to begin construction

One of Mozambique's most significant power sector investments, the USD $506 million Temane Transmission Project (TTP), will commence construction later this year. This Power Africa-supported project will deliver much-needed electricity from power plants at Temane in the northern part of Inhambane Province to the nation's capital, Maputo, in the south via a 563-kilometer transmission line. In December 2020, remaining project funders, the Islamic Development Bank (IsDB) and the OPEC Fund for International Development (OFID), issued letters of effectiveness, approving disbursement of their portion of debt funding.

The TTP reached its first funding milestone in June and July of 2019 when all financiers, including Power Africa partners the World Bank, the African Development Bank, and the Norwegian Trust Fund, committed to their respective funding contributions. The financial agreements between project funders and Mozambique's national utility, *Electricidade de Moçambique* (EDM), have several effectiveness conditions that must be met before the funds are released. With the IsDB and OFID issuing effectiveness letters in December, all sources of funding for the TTP became available, giving the green light to begin building.

The USAID Southern Africa Energy Program (SAEP), a Power Africa initiative, provided support for the project's evolving organizational and technical needs through an embedded advisor within EDM from January 2018 to December 2020. At crucial turning points, and throughout the unprecedented COVID-19 pandemic, the SAEP advisor guided and facilitated engagements between the funders and EDM to finalize the project financing plan and prepare the operational team to meet TTP's complex operational requirements.

A key component of Mozambique's 2015–2024 National Energy Strategy is the development of a transmission system to connect Mozambique's northern, central and southern power grids and strengthen regional connectivity to the Southern African Power Pool. The TTP forms part of this transmission system, making it essential to the social and economic transformation underway in Mozambique and Southern Africa.

The development of the TTP will facilitate a sustainable and renewable electricity supply and increase the reliability of available energy. The project supports EDM in its development of several distribution projects to increase connections, unlock the agricultural potential of rural areas and create higher value industrial jobs. The project itself is expected to create close to 1,800 jobs during the three-year construction phase.

In addition to increasing Mozambique's generation capacity and energizing its social and economic transformation, this project is also of great importance to the Southern African region.

Increased access to affordable and reliable energy supply across Southern Africa requires greater cooperation across borders to ensure power can move freely and securely. With efficient transmission systems in place, greater volumes of electricity can be traded at reduced costs to governments and consumers. Construction of the 400 kV transmission line will be completed by 2023.

Malawi's Generating Company Improves Disaster Recovery Planning

With the outbreak of the COVID-19 pandemic, many governments reacted with restrictions of economic activities – from disruptions in conducting day-to-day business to a complete lockdown of specific industries. To help mitigate the negative impact on Malawi's Electricity Generation Company (EGENCO), the USAID Southern Africa Energy Program (SAEP), a Power Africa initiative, collaborated with the utility to improve its response capacity during and after disasters by developing business continuity plans.

The pandemic is emerging as a prolonged and unique crisis and the need to respond to it by adopting agile ways of working and accelerating value chain transformation is vital. The energy sector in Malawi suffered an immediate negative financial impact caused by the significant reduction in economic activity and energy consumption by large- and medium-sized business customers. Electric utilities faced severe constraints on their operations and investment projects due to the limited capacity of external suppliers to provide materials and services and reduced staff resources due to remote work procedures, staff rotation in essential operational and support activities and restrictions on the size of field teams.

In continued support to improve the overall energy sector in Southern Africa, SAEP acknowledged the negative impacts and additional financial and operational difficulties that the COVID-19 pandemic is imposing on utilities, specifically EGENCO. To help manage the uncertainty, EGENCO needed to develop a risk management process and set up emergency task teams to deal with the pandemic and future disasters that could affect the utility's macroeconomic situation. Based on SAEP's advisory model to promote sustainable and collaborative capacity building, SAEP placed the responsibility of developing a business continuity system with EGENCO's risk management team. After the initial onboarding and workshops to introduce the key concepts, EGENCO assigned staff members to lead the development of the content and incorporate EGENCO's inner knowledge of its business into the design of a business continuity management (BCM) system. BCM forms part of an organization's overall risk management. It identifies risks, prioritizes risk treatment measures, and outlines the required actions to deal with critical disruptions and continue operations with as little impact as possible.

SAEP and EGENCO firstly focused on developing the business continuity policy document, and assigning roles and responsibilities to reduce the impact of disasters effectively. SAEP then issued a guide for designing and implementing the BCM system document to EGENCO. EGENCO's risk management team, with SAEP's support, presented the results to the EGENCO executives, who showed great interest in the process and acknowledged the positive outcomes of forward-looking planning in dealing with existing and potential future disasters. EGENCO has also incorporated the SAEP-developed risk database tool that integrates specific risk information and organizes BCM system information into a logical online storage structure.

Commitment from leadership is vital to successfully implement a BCM system. Therefore, SAEP conducted a virtual capacity building session in April 2021 for the EGENCO Board of Directors (BoD). SAEP presented and explained the process and plans developed and the BoD's role in making the business continuity system fully operational and sustainable.
EGENCO has since integrated the BCM system into its operations, which, in the event of a disaster, will help the utility to:

- Proactively assess risks and impacts and develop risk mitigation measures
- Guide disaster recovery teams
- Reduce the dependency on one individual by providing an integrated risk management process with clearly defined roles and responsibilities

- Identify and communicate the location of critical assets and data through a comprehensive risk data base
- Prioritize emergency communication relating to disaster
- Recover rapidly and continue operations

Quarter 4: July – September 2021

Mitigating Wildlife and Energy Infrastructure Collisions in Mozambique

The global effort to increase clean, affordable and reliable energy access comes at a cost to wildlife. Large mammals like giraffes and elephants often get electrocuted in protected areas where power lines are located too low to the ground and birds are highly impacted by transmission and distribution networks. The USAID Southern Africa Energy Program (SAEP), a Power Africa initiative, teamed up with the Endangered Wildlife Trust (EWT) to develop mitigation measures for utilities to better manage wildlife and energy interactions.

Energy infrastructure, such as distribution and transmission networks, and generation plants (non-renewable, renewable, off-grid and on-grid) serve as an important interface between people and wildlife. African power utilities are responsible for supplying electricity to meet the continent's ever-increasing demand as economies expand. As a result, the footprint of energy infrastructure is growing inexorably, causing an increase of environmental impacts. When wildlife comes into contact with electrical infrastructure, it has a cascading effect on utilities and, ultimately, end users. Aside from the obvious negative effects on wildlife, these types of incidents are costly for utilities, due to the loss of revenue and replacement of hardware. For example, during wildlife interactions, hardware components are frequently damaged, resulting in line trips, lock outs and unplanned outages that are costly to repair. By implementing a comprehensive wildlife management strategy, utilities can monitor and manage negative wildlife interactions and optimize utility performance.

Electricidade de Moçambique (EDM), the Mozambican utility, has been tasked with achieving the Government of Mozambique's goal of electrifying all households by 2030. This task necessitates, among other things, the construction of new electricity infrastructure, the reduction of damage to existing power lines, and the saving of costs. In April 2021, EWT travelled to Mozambique to meet with EDM staff and inspect electrical infrastructure in the field. The team assessed various distribution and transmission structures, feeders, towers and substations.

Following the field visit, SAEP and EWT evaluated EDM's readiness to implement a wildlife management strategy through a series of discussions and an online survey on capacity, financial resources, willingness to change business practices and perceived organizational benefits. It became clear that EDM needed to build capacity and raise awareness and that the utility was willing to adapt in this regard. This is not due to engineers and practitioners ignoring wildlife considerations during project planning, but rather to a lack of knowledge and experience when considering wildlife and birds, which results in large-scale projects moving forward without evaluating potential wildlife interactions.

In September 2021, SAEP presented the findings and proposals for developing and integrating a wildlife management strategy into EDM's operations to the EDM Board of Directors. The board was pleased with the work and excited about the next steps, which includes training for EDM's management and transmission and distribution teams. The training will focus on classifying and capturing incidents into a central database, identifying wildlife species and implementing appropriate mitigation measures or products. EWT will provide ongoing guidance to key staff as they implement their wildlife program. A wildlife management system will ultimately improve wildlife conservation, save money, improve public perceptions of EDM and contribute to Mozambique's sustainable attainment of universal electricity access.

USAID/Power Africa Grantee Expands Operations and Lights Up 114,500+ Households in Malawi

Yellow, a leading supplier of Pay-As-You-Go (PAYG) solar home systems in Malawi, has connected over 114,500 households to electricity. Yellow is a grantee under Power Africa's Solar Home System (SHS) Kick-Starter Program for Malawi.

Yellow has been operating in Malawi since 2018, selling affordable solar-powered systems to low-income customers in mostly rural areas. Before purchasing a SHS, many of Yellow's customers used kerosene lamps, candles, and battery torches for light. Yellow's sales agents also install the device, thereby bringing electricity to many households for the first time.

Yellow and Power Africa Collaborate to Bring Light to More Malawian Households

Malawi's current electrification rate is 15 percent, with only a five percent access rate in rural areas. To accelerate access to electricity in Malawi, the USAID Southern Africa Energy Program (SAEP) a Power Africa initiative, launched the SHS Kick-Starter Program in July 2019 and awarded $2 million in results-based grant funding to four SHS companies: SolarWorks!, VITALITE, Yellow, and Zuwa Energy. Under the program, SAEP provides grant funding to the companies in instalments based on quarterly sales performance against targets. In addition to funding, the program offers companies streamlined access to operational support like training on project management, sales force effectiveness, and agent recruitment and retention. Under the Kick-Starter, Yellow has achieved 67,458 connections. With an estimated average of five members per household, this enterprising company has been able to bring affordable, reliable, and clean energy to approximately 340,000 people across Malawi.

With the support of the grant, Yellow has:

- Scaled rapidly, hiring around 700 sales agents
- Increased sales volumes while maintaining a high-quality credit portfolio
- Opened a new sales office in Northern Malawi

The SHS Kick-Starter was catalytic in enabling this growth. Because Yellow strategically used the grant funding to raise additional capital, the end of the grant program in December 2021 will not hinder the business's growth trajectory, which is well-positioned for even more success in the market. An example of additional capital investment is the recent announcement that Power Africa partner, SunFunder, is providing a $4 million loan to Yellow to further expand its operations in Malawi.

Yellow's statistics between May 2018 and September 2021

Yellow's Innovative Technologies Driving Business Success

Through its mobile application (app), Ofeefee, launched in late 2019, Yellow has improved the distribution of its products to places where they could not go before. Yellow's sales agents use Ofeefee, translated as Yellow in English, to track their performance metrics and commissions and participate in company competitions.

In April 2021, Yellow introduced "Yellow Deals," a new platform on Ofeefee that puts all product offerings and sales requests in one place. The addition of "Yellow Deals" transforms Ofeefee from not only a profile and education delivery platform, but also into a sales platform. Having all the required functions on one app makes it easier for agents to sell products and for Yellow to add new product offerings and pricing deals.

Sales agents use the platform to show customers products on offer, including their specifications, and to register products before the installation. Yellow also has a customer portal where customers, each with their own link, can get immediate access to account information, see payment history and explore Yellow's product catalogue.

Yellow has also recently begun offering low-voltage plasma TVs and smartphones on PAYG packages. Once customers have access to electricity, Yellow offers a smartphone to the customer at a cheaper price based on their "Dolo-level." A customer's "Dolo-level" increases as the proportion of their already paid-off unit grows. This initiative helps ensure credit protection on the SHS units on which customers pay instalments and enables customers to build a credit history.

Earlier this year, Yellow built out its brand personality to improve customer experience and developed a new logo. In September 2021, Yellow launched a brand-new website that excels in both form and function, designed in a user-friendly format to better serve both customer and client. It encapsulates the company's vision for the future and demonstrates what Yellow has managed to achieve in a short time. Yellow hopes the website also communicates with potential funders and candidates who might like to join its workforce.

What Is Next?

Yellow's primary goal remains to provide access to electricity for its customers and, secondly, access to information through the sale of financed smartphone devices. Currently operational in Malawi, South Africa, and Uganda, the company aims to enter a fourth African country in the first quarter of 2022.

APPENDIX B PERFORMANCE MONITORING & EVALUATION TABLES

The table below shows the FY21 Annual results of the Program indicators, attributable to SAEP's efforts.

Number of Transactions Reached Financial Closure [PA6]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to Date**	**Life of Project**	**Data Source:** Activity counterpart (developer, government or donor) letter or email confirming financial close; written confirmation from Financial Mobilization Memo party; and/or public press release
Target	**5**	**1**	**0**	**0**	**6**	**NA**	**37**	**Note:** **Quarter 1:** Mozambique • Temane Transmission Project (TTP) with 900 MW reached FC **Quarter 2:** Malawi • Malawi-Mozambique Interconnector with 1,000 MW reached FC • Golomoti Solar PV with 20 MW reached FC **Quarter 3:** South Africa • 100 MW Redstone Concentrated Solar Power (CSP) project MW reached FC **Quarter 4:** SAEP did not have anything to report for this reporting quarter. **Deviation Narrative:** SAEP has already reached the life of project target for MWs reached financial close.
Actual	1	2	1	0	4	34	34	

(#AA) Capacity (MW) from Transactions Supported by SAEP that Achieved Financial Closure [I / PA1] [16]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Activity counterpart (developer, government or donor) letter or email confirming financial close; written confirmation from Financial Mobilization Memo party; and/or public press release
Target	**990**	**2.35**	**0**	**0**	**992.35**	**NA**	**4,000**	**Note:** **Quarter 1:** Mozambique • Temane Transmission Project (TTP) with 900 MW reached FC **Quarter 2:** Malawi • Malawi-Mozambique Interconnector with 1,000 MW reached FC • Golomoti Solar PV with 20 MW reached FC **Quarter 3:** South Africa • 100 MW Redstone CSP project reached FC **Quarter 4:** SAEP did not have anything to report for this reporting quarter. **Deviation Narrative:** SAEP has already reached the life of project target for MWs reached financial close.
Actual	900	1,020[17]	100	0	2,020	5,321.38	5,321.38	

[16] GCC indicator is "Clean energy generation capacity (MW) that has achieved financial closure (4.8.2-33)" This indicator includes both our target for 3,000 MWs generation and 1,000 MWs of new transmission capacity

[17] An update is made with regards to the MWs reported to have reached FC in Q2. Golomoti Solar PV was previously reported as a 18MW transaction. This amount has been confirmed to be 20MW instead of the 18MW previously reported.

Utilization of Risk Mitigation Tools [PA16]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Activity counterpart (developer, government or donor) letter or email confirming financial close; written confirmation from Financial Mobilization Memo party; and/or public press release
Target	**5**	**1**	**0**	**0**	**6**	**NA**	**37**	**Note:**
Actual	1	2	1	0	4	33	33	**Quarter 1:** Mozambique • Temane Transmission Project (TTP) used Sovereign Guarantee **Quarter 2:** Malawi • Malawi-Mozambique Interconnector 1,000 MW reached FC using a Sovereign Guarantee • Golomoti Solar PV 20 MW reached FC using a Sovereign Guarantee **Quarter 3:** South Africa • Redstone CSP project with 100 MW reached FC using a sovereign guarantee **Quarter 4:** SAEP did not have anything to report for this reporting quarter. **Deviation Narrative:** SAEP has already reached the life of project target for MWs reached financial close.

Number of Transactions Pending Financial Closure [PA5]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Transaction Advisors verify the number of transactions from project proposals, draft deal agreements or negotiation documents and update the transaction data in PATT and the SAEP transaction list. Whenever possible, source documents should be uploaded into the PATT.
Target	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**38**	**Note:** There are no quarterly targets for this indicator
Actual	0	0	0	0	0	84	84	

Generation and Transmission capacity (MW) pending financial closure [2 / PA2]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Transaction Advisors verify the MWs of transactions from project proposals, draft deal agreements or negotiation documents and update the transaction data in PATT and the SAEP transaction list. Whenever possible, source documents should be uploaded into the PATT.
Target	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**4,100**	
Actual	0	0	0	0	0	11,726	11,726	**Note:**
Gx	0	0	0	0	0	8,826	8,826	In Year 4 There were no new transactions that were officially added to the pipeline. SAEP continued working on and tracking their current basket of transactions. Any conversations that occurred with potentially new partners/developers did not result in a request for SAEP support.
Tx	0	0	0	0	0	2,900	2,900	

Number of New Grid and Off-Grid Projected Direct Connections [5 \ PA5]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project Progress Reports; M&E Tool; On-grid connections sourced from national and private utilities where possible. Off-grid connections sourced primarily from project sponsor documents and financial agreements.
Target	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**3,000,000**	**Note:** The balance of the remaining 1,594,204 projections is made up of the below breakdown: **On-grid** • EDM: 544,331 • ENDE: 479,358 **Off-grid** • Madagascar: 14,125 • Malawi: 117,789 • Mozambique: 118,470 • Zambia: 277,345
Actual	1,381,664	982,903	1,674,991	1,551,418	1,551,418	**1,551,418**	**1,551,418**	

(#AB) Direct Electricity Access [4 / PA10]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project Progress Reports; M&E Tool; On-grid connections sourced from national and private utilities where possible. Off-grid connections sourced primarily from project sponsor documents and financial agreements.
Target	**105,333**	**192,765**	**364,058**	**364,059**	**1,026,215**	**NA**	**3,000,000**	**Note:** The reported connections for Q4 are a result of SAEP's activities in Angola, Madagascar, Malawi, Mozambique and Zambia.

(#AB) Direct Electricity Access [4 / PA10]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project Progress Reports; M&E Tool; On-grid connections sourced from national and private utilities where possible. Off-grid connections sourced primarily from project sponsor documents and financial agreements.
Actual	105,333	153,711	170,803	211,796	641,643	1,551,324	1,551,324	**Off-grid: (106,549)** • **Madagascar:** 49,331 individual off-grid connections ○ **Solar Home Systems sales:** 49,331 ○ **Lantern's sales:** 0
Off-Grid	41,142	60,196	83,826	106,985	292,149	692,692	692,692	

(#AB) Direct Electricity Access [4 / PA10]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project Progress Reports; M&E Tool; On-grid connections sourced from national and private utilities where possible. Off-grid connections sourced primarily from project sponsor documents and financial agreements.

On-Grid	64,191	93,515	86,977	104,811	349,494	858,632	858,632	• **Malawi:** 30,893 individual off-grid connections
								  ○ **Solar Home Systems sales:** 30,893
								  ○ **Lantern's sales:** 0
								• **Mozambique:** 20,876 individual off-grid connections
								  ○ **Solar Home Systems sales:** 20,876
								  ○ **Lantern's sales:** 0
								• **Zambia:** 5,449 individual off-grid connections
								  ○ **Solar Home Systems sales:** 3,895
								  ○ **Lantern's sales:** 1,554
								
								On-grid: (104,811)
								• **Angola:** 28,142 connections
								• **Mozambique:** 76,669 connections
								
								Mini-Grid:
								• **Madagascar:** 436 connections
								
								Deviation narrative: On the on-grid connections, the delays in the World Bank and AfDB projects continue affecting the number of connections completed by ENDE in Angola.

Number of Transactions Commissioned [PA4]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** E-correspondence from USG Agency Partner, Development Partners, Private Sector Partners, Independent Power Producer/Developer/Consortium, Financier, and/or Host Government official; QTAT; Press release; News articles
Target	**5**	**3**	**4**	**0**	**12**	**NA**	**27**	**Note:** **Quarter 1:** South Africa • Excelsior Wind with 33 MW reached COD • Golden Valley Wind with 120 MW reached COD • Kangnas Wind Farm with 136.7 MW reached COD • Nxuba Wind Farm with 140 MW reached COD • Zeerust Solar Park with 75 MW reached COD **Quarter 2:** South Africa • De Wildt Solar Farm with 50MW reached COD • Kruisvallei Hydro Project with 4.7MW reached COD • Waterloo Solar PV with 75 MW reached COD **Quarter 3:** SAEP did not have anything to report for this reporting quarter. **Quarter 4:**
Actual	5	3	0	2	10	21	21	

Number of Transactions Commissioned [PA4]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** E-correspondence from USG Agency Partner, Development Partners, Private Sector Partners, Independent Power Producer/Developer/Consortium, Financier, and/or Host Government official; QTAT; Press release; News articles
								• Oyster Bay Wind Farm with 140MW reached COD • Wesley-Ciskei Wind Farm with 34.5 MW reached COD **Deviation narrative:** The following transactions were also expected to reach COD during the financial year but have experienced delays and not yet reached COD: • Greefspan PV Power Plant No. 2 Solar Park (55MW) • Karusa Wind Farm (139.8MW)

Generation Capacity (MW) Commissioned [3 / PA3]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** E-correspondence from USG Agency Partner, Development Partners, Private Sector Partners, Independent Power Producer/Developer/Consortium, Financier, and/or Host Government official; QTAT; Press release; News articles
Target	**372.72**	**129.7**	**373.48**	**0**	**875.9**	**NA**	**2,393.88**	**Note:**
Actual	504.7	129.7	0	174.5	808.9	**1,484.5**	**1,484.5**	**Quarter 1:** South Africa • Excelsior Wind with 33 MW reached COD • Golden Valley Wind with 120 MW reached COD

Generation Capacity (MW) Commissioned [3 / PA3]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** E-correspondence from USG Agency Partner, Development Partners, Private Sector Partners, Independent Power Producer/Developer/Consortium, Financier, and/or Host Government official; QTAT; Press release; News articles
								• Kangnas Wind Farm with 136.7 MW reached COD • Nxuba Wind Farm with 140 MW reached COD • Zeerust Solar Park with 75 MW reached COD **Quarter 2:** South Africa • De Wildt Solar Farm with 50MW reached COD • Kruisvallei Hydro Project with 4.7MW reached COD • Waterloo Solar PV with 75 MW reached COD **Quarter 3:** SAEP did not have anything to report for this reporting quarter. **Quarter 4:** • Oyster Bay Wind Farm with 140MW reached COD • Wesley-Ciskei Wind Farm with 34.5 MW reached COD **Deviation narrative:** The following transactions were also expected to reach COD during the financial

Generation Capacity (MW) Commissioned [3 / PA3]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** E-correspondence from USG Agency Partner, Development Partners, Private Sector Partners, Independent Power Producer/Developer/Consortium, Financier, and/or Host Government official; QTAT; Press release; News articles
								year but have experienced delays and not yet reached COD: • Greefspan PV Power Plant No. 2 Solar Park (55MW) • Karusa Wind Farm (139.8MW)

Electricity Loss Reduction (Aggregate Losses) / Aggregate Losses: Total technical and non-technical electricity losses [6 / PA12]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Utility records (Generation and sales records); utility loss calculator tools.
Target	**0**	**0**	**0**	**2%**	**2%**	**NA**	**2%**	**Note:** SAEP intervention will focus only on commercial losses, and will adopt the EDM set target (as prescribed by MIREME – Ministry of Energy) of reducing commercial losses by 2% per year over the next 4 years. **Deviation narrative:** The work that SAEP was doing with EDM around loss reduction was only completed in this quarter and, as a result, we will only be able to start reporting from on this indicator from FY22Q1.
Actual	0	0	0	0	0	**0**	**0**	

Expected Lifetime Energy Savings from Energy Efficiency or Energy Conservation [7 / PA13]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project Progress Reports; M&E Tool; Program records for OC4.
Target	**0**	**0**	**0**	**3,600**	**3,600**	**NA**	**5,724**	**Note:** The 18,360 Gj reported was from an energy efficiency activity conducted with EWSC. The estimated savings amount to 5,100 MWh (18,360Gj). This represents a reduction in energy consumption of about 20%.
Actual	0	0	0	18,360	18,360	**46,718**	**46,718**	

Total Public and Private Funds Leveraged by USG for Energy projects (USD millions) [17 / PA18]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** E-correspondence from Developer; QTAT; Press release; News articles as well as from the grants tracking system.
Target	**1,278.3**	**10.7**	**0**	**0**	**1,289,0**	**NA**	**7,232.6**	**Note:** **Quarter 1:** Mozambique • Temane Transmission Project (TTP) with 900 MW reached FC (US $551.6M) **Quarter 2:** Malawi • Malawi-Mozambique Interconnector 1,000 MW reached FC (US $35M) • Golomoti Solar PV 18 MW reached FC (US $50M) **Quarter 3:** South Africa • 100 MW Redstone CSP project reached FC (US $800M) **Quarter 4:** SAEP did not have anything to report for this reporting quarter.
Actual	551.6	85	800	0	1,436.6	6,126.5	6,126.5	

Number of Institutions with Improved Capacity [11]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Data collected using the Capacity Assessment Tool and or the Scope of Work tracker; Project Progress Reports; M&E Tool
Target	**0**	**0**	**0**	**15**	**15**	**NA**	**61**	

Actual	0	0	0	15	15	58	58	**Note:** This is an annual indicator, there is no quarterly reporting required • **ECB – Namibia:** Support development of Namibia Mini-grid Framework - **Y3.01.01.06.NAM** • **EDM EMU – Mozambique:** SAEP continued with the design of an HCD approach at EDM to foster customer centricity and facilitate new connections in Mozambique - **Y3.02.09.04.MOZ** • **EGENCO M&E Department – Malawi:** SAEP conducted a Sustainability and Solar PV KPI Workshops for EGENCO, which were attended by members from the M&E Department and from the Planning & Development Division - **Y3.02.03.01.MWI** • **ENDE – Angola:** SAEP once again supported ENDE to review the number of lots and to propose the optimal two solutions for AfDB's consideration - **Y3.02.09.01.ANG** • **ESERA – eSwatini:** SAEP recommended updates to ESERA's final draft "Electricity Multi-Year Price Determination Tariff Methodology". ESERA management accepted the major recommendation contained in SAEP's report, including the calculation of the Cost of Capital for each unbundled function - **Y3.01.01.13.SWA** • **LEWA – Lesotho:** This was a COVID-related Activity that resulted in the development of an Accounting Order tool for use by regulatory authorities that allows unexpected expenses to be accumulated for

								possible future recovery - **Y3.C19.01.01.14.REG** • **IRSEA – Angola:** Angola Roadmap for regulator start-up - In the final quarter of Year 3 SAEP updated the roadmap, which includes a final Gantt chart of the roadmap and explanatory notes for IRSEA - **Y3.01.01.01.ANG** • **MNRE – Botswana:** SAEP provided assistance to and participated in the 4-week grid connected testing period - **Y3.01.01.03.BWA** • **NERSA – South Africa:** NERSA was supported by SAEP in developing an approach to battery storage rules. SAEP submitted the final report together with recommendations on the Regulation of Battery Services in Namibia to the ECB on 22 July 2020 - **Y3.01.01.10.RSA** • **RERA – Regional:** This was a COVID-related Activity that resulted in the development of an Accounting Order tool for use by regulatory authorities that allows unexpected expenses to be accumulated for possible future recovery - **Y3.C19.01.01.14.REG** • **ZESCO Finance and Engineering Department – Zambia:** SAEP successfully concluded the workshops for the project finance and financial modelling for ZESCO in July 2020. A post-training questionnaire was sent to the 21 participants. The certificates for the course will be circulated upon receipt of all the completed post-training questionnaires - **Y3.02.03.02.ZMB**

Number of Institutions with Improved Capacity [11]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Data collected using the Capacity Assessment Tool and or the Scope of Work tracker; Project Progress Reports; M&E Tool
								• **Zuwa, Vitalite, SolarWorks, YellowSolar – Malawi:** Malawi SHS Kick-Starter: Operational Support for Grant Awardees - SAEP conducted trainings to the grantees. The trainings were in Sales Force Effectiveness and Project Management - **Y3.04.06.06.MWI**

Number of Women in Energy Sector Leadership Roles (Custom) [12]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project documents, energy institution records, and interviews; Project Progress Reports; M&E Tool
Target	**0**	**1**	**1**	**1**	**3**	**NA**	**12**	**Note:** **Quarter 1:** SAEP did not have anything to report for this reporting quarter. **Quarter 2:** Eswatini • There have been 2 female appointments at EWSC, namely: o Jabulile Mashwama was appointed as the Managing Director replacing the previous one, which was a male o Velile Dlamini was appointed as an Electrical Engineer, a position that was newly created Zambia
Actual	0	5	0	0	5	9	9	

								• There have been 3 female appointments at the Solar Industry Association of Zambia (SIAZ) executive team, namely:
								  ○ Mrs. Liliane Ndabazane appointed Vice-Chairperson
								  ○ Mrs. Cassandra Mhone appointed Treasurer
								  ○ Mrs. Yvonne Chansa appointed Secretary
								
								Quarter 3:
								SAEP did not have anything to report for this reporting quarter.
								
								Quarter 4:
								SAEP did not have anything to report for this reporting quarter.
								
								Deviation Narrative: SAEP has already exceeded the Year 4 target, due to achieving a better-than-expected result for FY21Q2.

(#Y) Number of Laws, Policies, Strategies, Plans, or Regulations Officially Proposed, Adopted, or Implemented [8 / PA15]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Record of laws, policies, strategies, or regulations
Target	**2**	**0**	**0**	**0**	**2**	**NA**	**31**	**Note:** **Quarter 1:** SAEP did not have anything to report for this reporting quarter. **Quarter 2:** Angola

Actual	0	1	0	0	1	33	33	• IRSEA: Development of Rules for Issuing and Revoking Licenses (Proposed) - **Y4.01.01.01.ANG** **Quarter 3:** SAEP did not have anything to report for this reporting quarter. **Quarter 4:** SAEP did not have anything to report for this reporting quarter.

Number of Reports, Analysis, Reviews, Action Plans, Tools Developed and Campaigns and Trips Implemented (Custom) [9]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project Progress Reports; M&E Tool
Target	**12**	**11**	**11**	**11**	**45**	**NA**	**205**	**Note:** SAEP produced the following reports in Q4: • Battery Service Regulation - Regional - **Y4.01.01.05.REG** • Evaluation of Regulatory Independence - **Y4.01.01.12.REG** • eSwatini Energy Regulatory Authority: Development of Mini-Grid and Off-Grid Regulatory Framework Review of Inception Report - **Y4.01.01.14.SWA** • Evaluating the Sustainability of Institutional Capacity in EGENCOs Human Resource Department - **Y4.02.03.03.MWI** • What Utilities Should Know About Credit Ratings: A White Paper on Credit Rating for Utilities - **Y4.02.08.01.REG*** • SAPP Guidelines for New Entrants - **Y4.03.04.01.REG**
Actual	14	13	20	12	59	**214**	**214**	

								• Building Effective Electrification Programs: A Dialogue with SADC Senior Energy Officials - **Y4.03.04.01.REG** • Learning Guide – Practical Insights Electrification of Informal Settlements - **Y4.05.01.05.REG** • Malawi SHS Kickstarter Reports: SolarWorks - **Y4.04.06.06.MW** • Malawi SHS Kickstarter Reports: Vitalite - **Y4.04.06.06.MWI** • Malawi SHS Kickstarter Reports: Zuwa - **Y4.04.06.06.MWI** • Transaction Advisory services summary - Mpatamanga and Themis Sahofika - **Y4.04.01.04.MWI**

Number of People Receiving Training in Global Clean Energy [13a]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Data acquired from project records and training logs
Target	**37**	**0**	**56**	**57**	**150**	**NA**	**1,313**	**Note:** **Quarter 1:** Angola • Change Management Workshop with RNT **(30 people trained for 120 Hours)** **Quarter 2:** SAEP did not have any planned training for this reporting quarter. **Quarter 3:** • SAPP Generic Production Optimization Model - Training I **(22 people trained at 4 Hours)**
Actual	30	0	22	272	324	1,338	1,338	
Male	25	0	19	193	237	1,058	1,058	

Female	5	0	3	79	87	280	280	**Quarter 4:** • SAPP Generic Production Optimization Model - Training 2 **(17 people trained at 16 Hours)** • SALGA Project Finance Training - Session 1: Understanding of Project Finance & Power Project Risks **(29 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 2: Debt Financing & Equity Financing **(17 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 3: PPA: Energy & Capacity charges **(20 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 4: The Power Project Value Chain **(22 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 5: Principal Infrastructure Financing Models **(21 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 6: Municipal pitches of power projects **(17 people trained at 2.5 Hours)** • SALGA Revenue Management Training – Session 1: Meter reading and Billing **(60 people trained at 7.5 Hours)** • SALGA Revenue Management Training – Session 2: Cash Flow Management and Credit & Debt Management **(69 people trained at 7.5 Hours)** **Deviation Narrative:** SAEP spent a significant amount of time conducting trainings with SALGA. These trainings were in Project Finance and Revenue

Number of People Receiving Training in Global Clean Energy [13a]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Data acquired from project records and training logs
								Management. The good attendance in the trainings led to us achieving our annual target.

Number of Person-Hours of Training [13b]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Data acquired from project records and training logs
Target	**296**	**0**	**452**	**452**	**1,200**	**NA**	**10,750**	**Note:** **Quarter 1:** Angola • Change Management Workshop with RNT **(30 people trained for 120 Hours)**
Actual	120	0	88	1,554.5	1,762.5	10,517.5	10,517.5	
Male	100	0	76	193	237	8,153	8,153	

Female	20	0	12	79	87	2,364.5	2,364.5	**Quarter 2:** SAEP did not have any planned training for this reporting quarter. **Quarter 3:** • SAPP Generic Production Optimization Model - Training 1 **(22 people trained at 4 Hours)** **Quarter 4:** • SAPP Generic Production Optimization Model - Training 2 **(17 people trained at 16 Hours)** • SALGA Project Finance Training - Session 1: Understanding of Project Finance & Power Project Risks **(29 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 2: Debt Financing & Equity Financing **(17 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 3: PPA: Energy & Capacity charges **(20 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 4: The Power Project Value Chain **(22 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 5: Principal Infrastructure Financing Models **(21 people trained at 2.5 Hours)** • SALGA Project Finance Training - Session 6: Municipal pitches of power projects **(17 people trained at 2.5 Hours)** • SALGA Revenue Management Training – Session 1: Meter reading and Billing **(60 people trained at 7.5 Hours)**

								• SALGA Revenue Management Training – Session 2: Cash Flow Management and Credit & Debt Management **(69 people trained at 7.5 Hours)** **Deviation Narrative:** SAEP spent a significant amount of time conducting trainings with SALGA. These trainings were in Project Finance and Revenue Management. The good attendance in the trainings led to us achieving our annual target.

(#X) Percentage of RFP Section F Deliverables Submitted in a Timely Manner (Custom) [10]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Program records
Target	**100%**	**100%**	**100%**	**100%**	**100%**	**NA**	**100%**	**Note:**
Actual	100%	100%	100%	100%	100%	100%	100%	

Kilometers of Power Lines Reached Financial Close [PA8]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project records tracking SAPP power lines; E-correspondence from Developer, and/or Government; QTAT; Press release; News articles
Target	**603**	**0**	**0**	**0**	**603**	**NA**	**1,166**	**Note:**
Actual	560	218	0	0	778	1,121	1,121	**Quarter 1:** Mozambique • Temane Transmission Project (TTP) with 900 MW reached FC (560 km)

Kilometers of Power Lines Reached Financial Close [PA8]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project records tracking SAPP power lines; E-correspondence from Developer, and/or Government; QTAT; Press release; News articles
								Quarter 2: Malawi • Malawi-Mozambique Interconnector with 1,000 MW reached FC (218 km) **Quarter 3:** SAEP did not have anything to report for this reporting quarter. **Quarter 4:** SAEP did not have anything to report for this reporting quarter.

National Energy Mix Showing % of MWs from Clean Energy Technologies in Each Country [PA7]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Government ministry documents; World Bank data; RERA national data
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**0**	**Note:** This is a tracking indicator. SAEP did not anticipate to report anything for this indicator for this financial year.
Actual	0	0	0	0	0	0	0	

Kilometers of Power Lines Constructed or rehabilitated [PA9]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Project records tracking SAPP power lines; E-correspondence from Developer, and/or Government; QTAT; Press release; News articles
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**0**	**Note:**
Actual	0	0	0	0	0	0	0	SAEP has nothing to report for this indicator this financial year.

Greenhouse Gas (GHG) Emissions Reduced, Sequestered, and/or Avoided (thousand tCO_2e) [PA14]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Program records, using the USAID CLEER Tool
Target	**579,061**	**0**	**957,747**	**0**	**1,536,807**	**NA**	**4,376,435**	

Actual	999,741	228,654	0	354,676	1,583,071	2,636,684	2,636,684	**Note:** This indicator was calculated by SAEP. Moving forward it will be calculated by the IFC CLEER team. **Quarter 1:** South Africa • Excelsior Wind (33 MW Wind Transaction) – 65,513 tCO2e • Golden Valley Wind (120 MW Wind Transaction) – 241,722 tCO2e • Kangnas Wind Farm (136.7 MW Wind Transaction) – 280,743 tCO2e • Nxuba Wind Farm (140 MW Wind Transaction) – 285,261 tCO2e • Zeerust Solar Park (75 MW Solar Transaction) - 126,502 tCO2e **Quarter 2:** South Africa • De Wildt Solar Farm with 50MW reached COD – 84,335 tCO2e • Kruisvallei Hydro Project with 4.7MW reached COD – 17,818 tCO2e • Waterloo Solar PV with 75 MW reached COD – 126,502 tCO2e **Quarter 3:** SAEP did not have anything to report for this reporting quarter. **Quarter 4:** • Oyster Bay Wind Farm with 140MW reached COD - 287,520 tCO2e • Wesley-Ciskei Wind Farm with 34.5 MW reached COD - 67,156 tCO2e

US Exports Supplied for Clean and Cleaner Energy Projects [PA17]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Press releases; E-correspondence from private sector partners; Company information
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**0**	**Note:**
Actual	0	0	0	0	0	0	0	SAEP has nothing to report for this indicator this financial year.

Partner Commitment Tracking ($ million USD) [PA19]								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Program documents
Target	**0**	**0**	**0**	**0**	**0**	**N/A**	**N/A**	**Note:**
Actual	0	0	0	0	0	1,137	N/A	SAEP has nothing to report for this indicator this financial year.

Number of competitive procurement processes for new generation capacity implemented with USG Power Africa assistance								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Program documents
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**2**	**Note:**
Actual	0	0	0	0	0	2	2	SAEP has nothing to report for this indicator this financial year.

Number of host-government power sector strategic planning documents adopted, implemented, or revised, with U.S. Government (USG) Power Africa support								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Program documents
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**0**	**Note:** SAEP has nothing to report for this indicator this financial year.
Actual	0	0	0	0	0	0	0	

New electricity capacity committed for regional trade through bilateral agreements								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Bilateral agreements collected from one country or from the regional power pools
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**0**	**Note:** SAEP has nothing to report for this indicator this financial year.
Actual	0	0	0	0	0	0	0	

Number of U.S. companies that participate in Power Africa outreach events								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Program attendance documents
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**1**	**Note:** SAEP has nothing to report for this indicator this financial year.
Actual	0	0	0	0	0	1	1	

Number of U.S. companies participating in Power Africa Projects/Transactions								
	FY21 Q1	**FY21 Q2**	**FY21 Q3**	**FY21 Q4**	**Year 4 Total**	**Total to date**	**Life of Project**	**Data Source:** Transaction advisor notes from meetings with developers, ownership documents, or press releases about transactions.
Target	**0**	**0**	**0**	**0**	**0**	**NA**	**2**	**Note:** This indicator requires the number of US companies that are involved in transactions that have reached FC and COD. **Quarter 1:** SAEP had nothing to report for this indicator in this quarter. **Quarter 2:** SAEP had nothing to report for this indicator in this quarter. **Quarter 3:** • SolarReserve LLC **(Redstone CSP project)** **Quarter 4:** SAEP had nothing to report for this indicator in this quarter.
Actual	0	0	1	0	1	3	3	

APPENDIX C TRANSACTIONS TRACKER[18]

In Year 4, SAEP's Transaction Advisory team supported the following projects in support of Program goals. In addition, SAEP initiated conversations with other developers. The outcome of those engagements may result in additional projects being added in Year 5. This is a list of transactions that SAEP is actively working on and tracking with an intention to support.

Connections

Project Name	Country	Technology	Est. Connections	Current Status
EDM	Mozambique	On-Grid	1,103,678 connections	SAEP support to EDM continued in this quarter, through the following concurrent interventions: EDM HCD Customer Experience Implementation (HCD Phase -II) SAEP piloted the three solutions developed in Phase I through the engagement of the two delegations, to represent two different realities - rural and peri-urban. The results of the pilots were presented to the Commercial Director and Board Member, Mr. Francisco Inroga, and were well received. EDM supported by SAEP is preparing to present the findings and the next steps to the EDM Board, in Y5 Q1. EDM EMU Program Implementation The continuation of the EDM EMU activity is dependent on the completion of the pilot stage of the HCD Phase-2, as EDM BoD approved in Y4 the continuation of these two activities in an integrated manner, and this is envisaged to continue in Y5 Q2. EDM Loss Reduction The SEAP team has completed the EDM commercial losses' analytics tool based on in-depth meetings with the EDM team and the

[18] The transactions presented here are transactions that we are currently designing transaction advisory scopes for or are currently providing targeted transaction support to.

Project Name	Country	Technology	Est. Connections	Current Status
				international practice. EDM is currently reviewing the tool and after refinements will be presented to the EDM BoD.
ENDE	Angola	On-Grid	756,351 connections	SAEP support to ENDE continued, both for AfDB and the World Bank related programs, concurrently, as follows: Support to ENDE with AfDB's ESEEP SAEP supported ENDE in preparation of the following tenders: The *System Tender*, which has progressed to the stage of ENDE awaiting the No Objection from the AfDB to commence with the 2-stage Request for Proposal (RFP) and issue the RFP to the AfDB-approved 6 short-listed companies during the previous, pre-qualification stage. The *Prepaid Metering Tender,* which is at the prequalification stage. SAEP supported ENDE in preparing the Expression of Interest (EoI), the ENDE Clarification session for the prospective bidders, and guidance with the Evaluation report provisions. ENDE received 22 submissions from the interested bidders and had appointed the evaluation committee to assess the applications against the agreed and communicated criteria. SAEP furthermore supported ENDE on two additional tenders, which were submitted to AfDB for NO Objection: *Supervision Consulting Services* (prequalification stage - EoI to be published), where SAEP prepared the EoI and TOR, and the recruitment of a *Consulting Company for Translation and Interpretation Services (Portuguese–English–Portuguese) for ENDE and RNT* (Prequalification stage - EoI to be published) Support to ENDE with the WB Electricity Sector Improvement and Access Project (ESIP), for the Revenue Protection Program (RPP)

Project Name	Country	Technology	Est. Connections	Current Status
				Work is in progress. SAEP prepared a draft TOR for the WB Revenue Protection Program Tender and led a workshop where ENDE and SAEP technical team aligned in terms of the TOR content and implemented the necessary adjustments. The next step is the alignment between ENDE (supported by SAEP) with the MINEA PCU, to further advance the readiness of the Tender documents. Once MINEA PCU Procurement Specialist deems the documents ready, the TOR and the bidding document will be submitted by the PCU to WB for No Objection.
ANKA	Madagascar	Mini-grid	10,500 connections	ANKA managed to commission their first AP1 grid project towards the end of quarter one of FY21. Throughout the remainder of FY21, they progressively added new connections to the grid project. At the end of FY21, a total of 436 connections had been added to the grid. During FY21, ANKA also reached out to SAEP with a request for assistance in raising funds for the remainder of their AP2 projects as well as other expansion plans. This resulted in SAEP facilitating an introduction between ANKA and the Eastern and Southern African Trade and Development Bank who expressed an initial interest in considering ANKA for financing. At the end of the financial year, SAEP was still assisting ANKA with coming up with options for sourcing grant and debt financing for their projects.
Baobab+	Madagascar	SHS	TBC	During the financial year, SAEP completed training activities for Baobab+. The program delivered two rounds of sales force effectiveness (SFE) training for sales managers - the first delivered virtually and followed up with an in-person refresher. The package of training interventions also included the development of material for the Baobab+ training app which was handed over to the company for uploading to the app. By the end of FY21, Baobab+ had reported an annual sales total of 49,331.
Madagascar Mini-Grid Grant	Madagascar	Mini-Grid	5,216 Connections	All three companies under the grant program experienced some challenges with adhering to timelines. Autarsys and HIER have experienced challenges that will result in a two to three-month delay for each company. This will move the planned completion dates to March and April 2022. These challenges include the inability to predictably receive delivery of equipment due to sea transport

Project Name	Country	Technology	Est. Connections	Current Status
				delays. SAEP is also exploring different avenues to establish the true status of Henri Fraise's project and to determine if they will be in a position to successfully deliver their mini-grid. The company has seemingly been experiencing challenges the nature of which is unclear.
Mozambique Off-Grid Companies	Mozambique	SHS	208,521 connections	During Year 5, SAEP released an updated version of the RTM tool which off-grid companies use to plan market expansion activities. The program also kept companies updated on developments with the fiscal incentives work and provided ad-hoc market intelligence support.
Malawi SHS Kick-Starter Grant	Malawi	Solar	253,636 connections	Grant is on track and the support package planned for Year 4 has been delivered. One of the Kick-Starter Program grantees, Yellow Solar, has reported achieving its targets for the grant program. Other tasks during the year included engaging stakeholders to find solutions for perceived inconsistencies in applying VAT/duties to solar products by the Malawi Revenue Authority's recent, and broader industry matters. SAEP also reviewed a series of modules from a training program for solar companies that will be rolled out across the continent; this work is led by BoP Inc. and GDC.
Zambia Off-Grid Companies	Zambia	SHS	655,245 connections	Ad-hoc technical assistance was provided to mini-grid and SHS companies throughout the year to help them to overcome issues and manage risks. Mini-grid developers who received assistance include those that are receiving grants under the EU IAEREP program who had to manage several implementation risks including taxation and requirements for project guarantees.

Transmission

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
Mozambique–Malawi	Cross-border	Transmission	1,000	The World Bank advised on 14 July 2020 that the Project Implementation Manual (PIM) for the Malawi–Mozambique 400 kV interconnection project has been concluded and that the project has now reached financial close. The Requests for Bids (RFB) for the EPC contractor overhead transmission line (the interconnector) were published on 21 July 2020 in Malawi's Daily Times Newspaper and announced through the Club of Mozambique (an online news outlet) on 28 July 2020. ESCOM also issued an FC claim letter acknowledging SAEP's assistance and the role played in the project reaching FC During year 3 the Phase 1 activity to train ESCOM to operate in an interconnected system was concluded and the original plan for year 4 was to kickstart Phase 2. However, because of the travel embargos due to COVID-19, this activity is put on hold and will only continue once the travel restrictions have been lifted, which SAEP anticipated being lessened going into Year 5. This next phase is going to be based on site visits for the ESCOM trainees to 3 SAPP utilities currently part of the Southern African Power Pool.	31-July-20 (FC Reached) Expected COD: 2022
Temane Transmission Project (TTP)	Mozambique	Transmission	450 (Gx) 900 (Tx)	During Year 4 TTP reached a major milestone with the World Bank, Norwegian Trust Fund, and AfDB issuing declaration of effectiveness letters confirming that all conditions for the effectiveness of the grant have been	10-Dec-20 (FC reached)

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				met. The Islamic Development Bank (IsDB) and OPEC Fund for International Development issued effectiveness on 25 November 2020, and the letter was received by TTP on 27 November 2020. OFID effectiveness was achieved on 7 December 2020. WB then granted NO to the direct selection of Mr. Bruno Batista as the official project coordinator for the TTP project as of 1 November 2020 up till 21 December 2024. On 18 January 2021 EDM issued an FC Claim letter acknowledging SAPP's assistance and role in the project reaching FC. Based on the feedback received from the counterparts (Mr. Bruno) the project is well advancing towards construction, with contracts now signed for all six lots (substations and the line). On 1 June 2021, the Government of Mozambique officially launched the commencement of the construction of the TTP line, with the President acknowledging and commending the role USAID played in the project advancing to the stage it is now at (FC reached and kick-start of construction). During the last quarter of Y4, SAEP was informed that the containers with the transmission line conductors arrived in Mozambique, this also included all other materials required for construction. Additionally, Factory Acceptance Tests (FATs) and Tower Type tests were carried out. Going into Year 5, the SAEP will continue to monitor and report the project's progress.	Expected COD: 2024

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
Angola Central-South	Angola	Transmission	1,000	During Year 4, SAEP continued to support Angola's transmission company, RNT, to manage the development of the AfDB-funded 343 km 400 kV transmission line that will interconnect central and southern Angola. The construction of this transmission line will allow for the evacuation of around 1,000 MW from North to South and is critical to the Angola–Namibia (ANNA) interconnection project, which will facilitate power trade between the two countries and enable Angola to join the Southern Africa Power Pool (SAPP) for the first time. Key components of support during Year 4 have been: • Continuation with facilitating the operationalization of the RNT PIU, which is critical for the management of the AfDB-funded Angolan Central–South transmission system project. This has been through an increased scope for the SAEP team as they have temporarily moved from advisory setup to more consultatory work, upon a time new specialists will be recruited in the RNT PIU to assist with delivery • Recruitment of the 5 new specialists, which are Procurement, Project Management, Financial, Environmental and Social Specialists • Assistance with the overall project management, though an SAEP interim Project Manager who has been working very closely with the RNT Project Coordinator • Knowledge transfer and technical skills sharing, on the different PIU sections, engineering and Environmental & Social	8-Sep-20 (FC reached) Expected COD: 2024

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				• Finalizing the procurement of consulting services for the development and implementation of the resettlement action plan, owners engineer, and engineering procurement and construction (EPC) contractor prequalification's Going into Year 5, the SAPP team will continue to intensify their assistance to the RNT PIU as we prepare for the closeout of the PIU assistance, this will entail continued consultatory geared assistance with all the project activities to ensure that all deadlines and milestones are met accordingly. Major activities of focus will be the following: • Finalization of the recruitment of owners engineer consultant • Relaunch of the procurement process for the RAP implementation consultant • Finalization of the recruitment of the five new specialists who will be assisting the RNT PIU, and assistance with the full onboarding • Finalization of the procurement of the office space, IT equipment (and furniture), financial auditor, translator, and acquisition of small goods • Finalization and implementation of a transition plan which will detail all specific actions that must take place between now, at the outset of SAEP's final year under contract, through September 2022, when all transition activities must be finalized	

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				• Finalization of the recruitment of the external auditor, engineering specialist, gender specialist, and environmental auditor • Finalization of the procurement of the Gove Menongue Feasibility Studies Consultant • Finalization of the procurement of the Monitoring and Supervision Consultant • Finalization of the office space procurement	

Generation

Projects that have reached FC; tracking to COD

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date and Anticipated COD
Karusa Wind Farm	South Africa	Wind	139.8	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 31-Jul-18 COD: 31-Dec-2021
Soetwater Wind Farm	South Africa	Wind	139.4	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 31-Jul-18 COD: 31-Dec-2021
Greefspan PV Power Plant No.2 Solar Park	South Africa	Solar PV	55	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 31-Jul-18 COD: 31-Dec-2021

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date and Anticipated COD
Roggeveld	South Africa	Wind	140	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 13-Apr-18 COD: 31-Dec-2021
Copperton Wind Farm	South Africa	Wind	102	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 20-Aug-18 COD: 31-Dec-2021
Ngodwana Energy Project	South Africa	Biomass	25	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 12-Apr-18 COD: 31-Dec-2021
Garob Wind Farm	South Africa	Wind	135.93	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 31-Jul-2018 COD: 31-Dec-2021
Loeriesfontein Orange Solar	South Africa	Solar	75	REIPPPP project. The transaction is still currently under construction.	FC Achieved: 14-Dec-18 COD: 31-Dec-2021
Salima Solar PV	Malawi	Solar PV	60	Financial close for this transaction was reached on 31 January 2019. Following further discussions between the SAEP Lead Transaction Advisor and Infraco Africa's Head of Asset Management, Mr. Connor Dawson, reported that the commencement of commercial operations was previously anticipated by 30 April 2021, and then this was revised to 31 August 2021. Due to COVID delaying some of the logistics, the commencement of commercial operations has been further moved out to 31 December 2021.	FC was 31-Jan-19 COD expected 31-Dec-21

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date and Anticipated COD
				On 16 July 2021 the African Trade Insurance (ATI), through the Regional Liquidity Support Facility (RLSF), announced that they will provide insurance cover for an amount of $4.4 million against the risk of delayed payment by ESCOM for the 60MW Salima Solar PV project. The insurance will be for an initial tenure of up to ten (10) years to provide cover of $4.4 million against the risk of PPA payment defaults by ESCOM under the 20-year Power Purchase Agreement (PPA). This liquidity cover by RLSF is anticipated to enable the project to raise the required project financing of around $78 million.	
EEC Lavumisa	eSwatini	Solar	10	SAEP supported EEC when they were working to finalize the project and supported it with a vRE study. EEC analyzed sourcing finance for the project by two options: a corporate raise to include T&D investments or solar project finance raise for Lavumisa only. EEC decided to include the project in a corporate raise. In July 2019 it was announced that Eswatini has signed a USD $16 million contract with South African based EPC company, CONCO, a subsidiary of Consolidated Infrastructure Group (CIG) Limited, for the construction of a 10 MW solar power plant. The project will be financed by the Eswatini Pension Fund and local banks. The land has been secured and an EIA has been completed. The 10 MW Lavumisa solar plant is nearing completion and when completed, will be the country's first utility-scale photovoltaic (PV) plant. The total cost of the	FC Achieved: 31-Aug-19 COD: 31-Dec-2021

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date and Anticipated COD
				project is SZL255-million (USD18.4-million / EUR15-million).	
Nkhotakota Solar IPP Project	Malawi	Solar	26	Following further discussions between the SAEP Lead Transaction Advisor and Phanes's, Senior Communications & Marketing Manager, Mrs. Louise Carne during the reporting period, Mrs. Louise Carne stated that the construction team is onsite and progressing well, although delays are being experienced due to COVID-19. The commercial operations date (COD) is still scheduled for 31 December 2021.	FC was 31-Dec-19 COD expected 31-Dec-21
Golomoti Solar PV plus Storage	Malawi	Solar PV plus battery storage	20 MWac + 5MW/10 MWh BESS	Construction is underway and progressing well. The EPC is being done by Chinese company Sungrow Power Supply. The project was recognised as 'Battery Storage Project of the Year' by industry publication IJGlobal at its Virtual Awards Ceremony held on 29 June 2021 Following further discussions between the SAEP Lead Transaction Advisor and Infraco Africa's Head of Asset Management, Mr. Connor Dawson, it was stated that the commencement of commercial operations is still targeted for 31 December 2021. COVID-related delays in PV panel manufacturing are however putting additional challenges on the construction schedule and delivery milestones. It was reported in the media that Sungrow has partnered with JCM Power, InfraCo Africa, RINA, and Innovate to build Malawi's first utility-scale solar-plus-storage project. Sungrow is a supplier of solar photovoltaic (PV) and battery energy storage systems (BESS) solutions.	FC was 31-Dec-20 COD expected 31-Dec-21

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date and Anticipated COD
				The project will fully adopt Sungrow's one-stop solar-plus-storage medium voltage (MV) solution comprised of a PV inverter, an MV station, an all-in-one power conversion system, battery container, and energy management system. Sungrow's PV and storage technologies will be deployed to improve the availability, reliability, and quality of Malawi's power supply through its capabilities in providing frequency regulation, voltage regulation, peak shaving, and reactive power support. JCM Power will manage all engineering, procurement, and construction (EPC).	
Redstone Concentrated Solar Power (CSP) Thermal project	South Africa	Solar CSP	100	SAEP provided technical assistance to the IPP office. The 100MW Redstone CSP project was awarded Preferred Bidder status by the DOE in Round 3 of the REIPPPP. The project however experienced delays and was recently still awaiting the resolution of the impasse with Eskom relating to the signing of the PPA. ACWA Power, the Saudi developer, investor, and operator of power generation and water desalination plants announced the commencement of construction on the 100MW Redstone project following the achievement of financial close at the end of June 2021. At ZAR 11.6 billion (162.457 million) total investment, the Redstone project is the largest renewable energy investment in South Africa to date. The project is located in the Northern Cape Province of South Africa. The plant will be equipped with a 12-hour thermal storage system.	FC Achieved: 30-Jun-21 COD: Q4 2023

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date and Anticipated COD
				Commencement of operations is scheduled for Q4 2023.	

Projects that are ON HOLD

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date
Mazenod	Lesotho	Solar	40	During communication between SAEP Lead Transaction Advisor and Phanes's Managing Director – Origination, Mr. Malik Bencherchali, he reported that they have not been able to make progress and have decided to put their Lesotho and Mozambican projects project ON HOLD until the end of 2021. They are rather focusing their efforts on more responsive markets.	30-Sep-22
Eswatini Combined Cycle Gas Turbine (CCGT) Project	Eswatini	LNG (Liquefied Natural Gas	310	The transaction is ON HOLD. The developer made no progress during the reporting period.	(No confirmation)
RSSC Grid-Tied Solar PV Plants	Eswatini	Solar PV	10	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Mar-22
Gigawatt Zambia Hybrid Project	Zambia	Hybrid RE/EE	71	The transaction is ON HOLD. The developer made no progress during the reporting period.	30-Dec-22
Mohale's Hoek	Lesotho	Solar	30	During communication between SAEP Lead Transaction Advisor and Phanes's Managing Director – Origination, Mr. Malik Bencherchali, he reported that they have not been able to make progress and have decided to put	30-Jun-22

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date
				their Lesotho and Mozambican projects project ON HOLD until the end of 2021. They are rather focusing their efforts on more responsive markets.	
Kanengo Solar	Malawi	Solar	20	The transaction is ON HOLD. The developer made no progress during the reporting period.	30-Sep-22
Kabompo Hydro	Zambia	Hydro	40	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Mar-23
Lilongwe Solar	Malawi	Solar	25	The transaction is ON HOLD. The developer made no progress during the reporting period.	30-Sep-22
Luweya River Phase I	Malawi	Hydro	15	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Mar-23
Dondo Solar	Mozambique	Solar	50	Phanes Group was developing the 50 MW Dondo Solar PV project. During the reporting period, SAEP Lead Transaction advisor followed up with Phane's Managing Director – Origination, Malik Mr. Bencherchali. Mr. Bencherchali stated that they have shifted their focus away from Mozambique to other markets presently (no details were provided on the other markets). ARENE, the Mozambican energy regulator announced that five entities were shortlisted for the development of the 30 MWac (40MWp) Dondo Solar PV project in Mozambique under the PROLER Programme. Phanes was not included in the shortlist. The shortlisted entities are: • EDF Renouvables • ENEL Green Power S.P.A	30-Sep-22

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date
				• Globeleq Africa Holding Limited / Akuo Energy SAS • Scatec Solar ASA • Total Eren SA	
Lichinga Solar	Mozambique	Solar	23	The European Commission, together with the French Development Agency (AFD) is supporting the country's Projeto de Promoção de Leilões para Energias Renováveis (PROLER) auction scheme for renewable energies. For the PROLER scheme, the following three 40 MW solar plants, as well as one 40 MW wind project, are targeted. The project will potentially be included in the PROLER project.	30-Jun-22
Wonderkop Smelter	South Africa	EE	40	The transaction is ON HOLD. The developer made no progress during the reporting period.	30-Sep-22
IPP Global	South Africa	Gas-to-Power Project	200	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Dec-23
Arcelor Mittal South Africa (AMSA) Solar PV Energy Procurement	South Africa	Solar PV	160	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Dec-22

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date
West Rand Urban Solar Farm	South Africa	Solar	10	The transaction is ON HOLD. The developer made no progress during the reporting period.	30-Jun-22
Themis Sahofika	Madagascar	Hydro	192	No updates for this reporting period. This project remains on hold. The previously anticipated financial close date of 31 December 2021 is not possible, however, there isn't a view yet of what an appropriate date would be.	31-Dec-21 (Date not possible. Updated date yet to be confirmed)
Mbongozi Power	Malawi	Hydro	41	During follow-up discussions between the SAEP Lead Transaction Advisor and Mr. Songhi in September 2021, Mr. Songhi stated that they have considered inputs and EGENCO decided that they would not partner with HE Power on the project. The decision was also communicated by EGENCO to HE Power. HEP would remain involved but will need to seek other partnering possibilities.	31-Mar-22
Buroma Hydro	Mozambique	Hydro	200	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Mar-23
Lupata Hydro	Mozambique	Hydro	600	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Mar-23
Baynes Hydro Power Project	Namibia	Hydro	600	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Mar-23
Mondi - Biomass / Cogen Richards Bay plant	South Africa	Biomass	48	The transaction is ON HOLD. The developer made no progress during the reporting period.	31-Dec-22

Project name	Country	Technology	Project size [MW]	Current Status	Financial Close Date
GET FiT Zambia Round 1 – Small Solar	Zambia	Solar	120	The transaction is ON HOLD The selected developers previously expressed concern and discomfort with the "bankability" and credit risk of the PPA's with ZESCO. This is because of ZESCO's financial situation and uncertainty around the support the government will provide and require comforting/supporting letters from the Govt of Zambia	30-Sep-22
GET FIT Zambia Round 2 - Mini Hydro	Zambia	Hydro	100	The transaction is ON HOLD This transaction is meant to follow once the GET FiT Round 1 project progresses.	31-Dec-22 (Could be later)
Kafue Gorge Regional Training Centre	Zambia	Hydro & Wind	10 MW Hydro & 7.5 MW Wind	The transaction is ON HOLD. The developer made no progress during the reporting period.	N/A

Projects that are ACTIVE

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
BPC Solar PV	Botswana	Solar PV	100	SAEP continues to provide support to BPC as procurement advisors to support BPC and advance the project. After significant changes to the procurement documentation (which are confidential), the procurement closed in December 2020. SAEP continues to support the ongoing team meetings at BPC to advance the project and is assisting BPC with updated evaluation criteria to match the new project details. Due to the COVID-19 pandemic, further discussions will take place to determine how SAEP will directly support the evaluation process itself and the	30-Dec-21

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				necessary evaluation meetings, once bids are received. Other information is procurement sensitive and confidential.	
Kalahari Energy Coal Bed Methane (CBM)	Botswana	Coal Bed Methane (CBM)	97	Following discussions between the SAEP Lead Transaction Advisor and Mr. Posthumus during the reporting period, it was stated that the proposed PPA under discussion as received from the Ministry of Energy is still targeting a capacity of 97 MW. Kalahari is comfortable that the Legal advisor to the ministry, Mr. Ben Donavan is well experienced in CBM projects Kalahari is busy with PPA mark-ups and targeting sending PPA comments to the Ministry of Energy by October 2021.	30-Jun-22
Neo1 - OnePower	Lesotho	Solar PV	20	Following further discussions between the SAEP Lead Transaction Advisor and Mr. Motzen during the reporting period, it was reported that One Power is making good progress with the IA negotiations. They have proceeded to mandate lenders for the arrangement of debt for the transaction. Financial close is anticipated by the first quarter of 2022.	31-Mar-22 (Confirmed by the developer)
ANKA Segments 2 & 3: Madagascar	Madagascar	Mini-grid	2.35	SAEP Lead Transaction Advisor arranged for an introductory meeting between the Eastern and Southern African Trade and Development Bank (TDB's) Mr. Chikarango and ANKA's General Manager & Associate, Mrs. Camille André-Bataille in respect of ANKA's debt financing needs. The meeting was very positive and discussion items included i) TDB signed a $400m line of credit with the World Bank. Within this amount, a component of $75m is targeted at off-grid SME, ii) The GCF's financing is part of an overall $900-million programme budget that targets scaling up the roll-out of mini-grids, solar home systems, and commercial and industrial solar solutions.	AP2 Phase 1: Completed 12/31/2020 AP2 Phase 1 bis project: 12/31/2021 Scale North: 03/31/2022 AP2 Phases 2 & 3: 12/31/2023

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				TDB expressed an interest to further investigate potential financing assistance to ANKA. The Way forward between TDB and ANKA was agreed as follows: i) NDA to be executed between TDB and ANKA, ii) ANKA to provide detailed project information and financing needs to TDB, needs about $4.5m, iii) TDB has a minimum project threshold of $5m, but TDB will motivate approval of the project if TDB views the project as a high social impact project, iv) Desktop review/appraisal by TDB and v) If results of the review/ appraisal by TDB is positive, TDB will then advise ANKA on further information and documentation required.	
Mpatamanga Hydro Electric Project	Malawi	Hydro	350	SAEP is serving as the transaction advisor to the Mpatamanga Hydropower Project, which on 11 February 2020 launched as the first competitive tender in Africa to identify a strategic sponsor to develop, finance, and operate a large-scale hydropower project. SAEP's transaction advisory team guides the procurement process and the diverse set of advisors supporting the government in this effort. Mpatamanga will add 350 MW of renewable energy to the country's generation capacity, thereby diversifying Malawi's energy profile with renewable energy and ultimately reducing its reliance on fossil fuel sources. Further, 310MW of Mpatamanga will be dispatchable power which will unlock additional renewable energy generation potential in Malawi. Its dispatch pattern will reduce output during the day and increase output during the evening, accommodating additional PV and wind generation integration. The inclusion of the plant's reservoir is equivalent to introducing a 7,000MWh battery system into the grid, resulting in the least-cost solution for Malawi. The project is expected to achieve FC during 2023 and will have a construction period of 52 months.	30- June- 23

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				During Year 4, SAEP supported the Government of Malawi during the procurement process for a Project Sponsor, including the facilitation of seven virtual bidders' conferences, and coordinating with GoM's advisors to respond to bidders' requests for clarifications. In addition, following the SAEP's support of GoM's successful request for a USD $6 million advance on their IDA loan for use on additional advisors, SAEP assisted Malawi to establish and onboard a project implementation Unit (PIU) that will oversee government responsibilities related to the use of the loan advance. On 17 September 2021, the bidder submitted the bid for Project Sponsor, a major milestone on the project. The Project Sponsor is the key player in taking the project to Financial Close. GoM commenced with their evaluation of the bid for project sponsor and SAEP traveled to Malawi to support the process including facilitating the affordability calculations. Once the bid is deemed to be compliant, GoM will enter into negotiations with the bidder. The Sponsor is expected to be appointed in January 2022 In addition to the Project Sponsor activities, SAEP facilitated consultations between the GoM and the E&S consultant, Mott MacDonald to address procurement complexities that have put Mott MacDonald's work on hold. Mott is tasked with the ongoing revision of the ESIA, Biodiversity Action Plan, and RAP. The successful conclusion of these elements is another essential step towards the attainment of FC.	
Nchalo Solar IPP Project	Malawi	Solar	10	Illovo Sugar Malawi is an energy-intensive user and considering heat and electricity supply options for its use. The Nchalo Mill currently has 5 boilers and turbines producing 9 MW of power. There is potential for the	30-Sep-22

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				addition of 2 boilers and a turbine to produce 23 MW (>100 GWh/a), or even a larger turbine to be linked to a new boiler generating up to 30-35 MW. SAEP previously tasked legal firm, Cliffe Dekker Hofmeyr (CDH) for a legal review of the regulatory framework in Malawi that could be impacted by Illovo's contracting and electricity generation options. Following further discussions between SAEP and Illovo Sugar, it was reported that depending on the technical configuration, Nchalo could supply a large portion of its own energy and electricity needs, and could even assist ESCOM with the supply of surplus electricity into the ESCOM grid. Various commercial, contracting, financing, and regulatory items were discussed during the meeting. As Nchalo is still internally considering various options, other updates are confidential of nature.	
NACALA Combined-Cycle Gas Turbine project	Mozambique	LPG	145	Following further discussions between the SAEP Lead Transaction Advisor and Nacala President, Mr. Hugh Brown, it was reported that The Government of Mozambique has indicated its support for the project to become the first export power plant. The government and EDM are both in support of Nacala becoming a member of the SAPP. Nacala has received all items needed from EDM and the Government of Mozambique The Government of Mozambique and EDM have accepted a force majeure application, including COVID-19 related items; Nacala will revise project timelines Nacala will proceed to approach investors for the project	30-Jun-22

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				The SAEP Lead Transactions Advisor continues to work with USAID and Nacala on Nacala becoming a Power Africa Partner	
Mandimba Solar	Mozambique	Solar	50	During the reporting period, SAEP Lead Transaction advisor followed up with Phane's Managing Director – Origination, Malik Mr. Bencherchali. Mr. Bencherchali stated that they have shifted their focus away from Mozambique to other markets presently (no details were provided on the other markets).	30-Jun-22
Naamacha Wind Farm	Mozambique	Wind	60	eleQtra is leading the development of the 120MW Namaacha Wind IPP, to be developed in two phases of 60 MW each, located in the Namaacha District in southern Mozambique. The project was awarded a USD $2 million in USTDA grant and USD $400,000 from AfDB for legal fees. This plant will be among Mozambique's first utility-scale wind power plants. EleQtra project leader, Mrs. Lauren Thomas is leading the development of the project. Following further discussions between SAEP Lead Transaction Advisor and Mrs. Thomas during the reporting period, it was reported that the frightening events in the north of the country are concerning to the eleQtra team. eleQtra is moving forward with the land issues and received a positive resolution from the provincial government for eleQtra to move forward with the next phase of studies!	30-Sep-22
CENORED	Namibia	Solar PV and Battery storage	10 MW Solar + 10 MWh storage	To reduce cost exposure, CENORED is implementing a strategy to integrate embedded distributed generation capacity within its network and thus reduce dependence on NamPower supply. CENORED has identified six solar PV sites for consideration and intends to procure solar PV-generated electricity from independent power producers (IPPs) for the installation of Solar PV grid-connected	30-Jun-22

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				systems. To manage the variability from these potential renewable energy (RE) plants CENORED is also considering the use of battery energy storage (BESS). The systems will be integrated into CENORED's network for which they intend to run a bidding process for the ultimate selection of IPPs, with all sites developed on an IPP basis. CENORED's Executive Manager, Engineering & Systems Development, Mr. Silvester Wayiti is leading the project. During the reporting period, CENORED publicly issued a "Request for Expression of Interest and Pre-qualification for the Procurement of Alternative Energy". SAEP assisted with the further distribution of the clarification note to the South African Independent Power Producer Association (SAIPPA) to distribute to and inform their members.	
Oshakati Premier Electric (OPE)	Namibia	Solar PV	5	Oshakati Premier Electric (OPE) Executive: Finance, Mr. Bennodictus Sheehama provided SAEP with a summary as well as an internal evaluation done by OPE on financing offers received from various financiers for potentially assisting OPE with debt and equity financing for the project. OPE used an internal financial model to evaluate the proposals received. SAEP has not had insight into the direct discussions between OPE and financiers. SAEP Lead Transaction Advisor and SAEP Namibian Country Manager provided OPE with additional inputs and comments on the summary of the financing entities and financing options provided. Details hereof are confidential of nature.	30-Sep-22
City of Cape Town: Support to IRP and IPP Efforts	South Africa	Solar	70	Given the ministerial determination that will potentially allow qualifying municipalities to purchase electricity directly from IPPs, the CoCT wants to move forward with some initiatives in this respect.	31-Dec-22

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				In May 2021, SAEP and the CoCT discussed ideas for collaboration with the CoCT, and some potential items for collaboration were identified. The following four (4) additional areas of collaboration are covered in the latest LOC to be completed over the next 4-5 months. • **Task Five:** High-level pre-feasibility of a 60MWac Solar PV Facility at the Paardevlei site, Somerset-West • **Task Six:** Risk and commercial review of draft final PPA • **Task Seven:** Tariff design for the IPP program • **Task Eight:** Financial modeling input to 10MW Atlantis Solar Feasibility Study In respect of Task Five, by the end of June 2021, SAEP Lead Transaction Advisor had progressed well with the development, preparation, and population of the 60 MWac Paardevlei financial model(s). The model will be shared with the CoCT once the project officially commences. SAEP is currently awaiting final project approvals by the CoCT.	
City of Cape Town Rooftop PV SSEG Program	South Africa	Solar	50	The City of Cape Town is currently reviewing the commercial options under which to pursue the project.	30-Sep-22
SunElex: Matjhabeng Solar	South Africa	Solar	450	SAEP provided financial modeling assistance to SunElex. SunElex unfortunately did not provide a bid submission in the REIPPPP bid window 5 that was due on 16 August 2021. They have said they have plans to bid in Bid Window 6	31-Dec-22

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
Chipili & Mansa Power Projects: CGM Power Group	Zambia	Hydro	2 x 50 MW Solar PV plus 2 x 20 MW BESS	CGM Power Group is developing the two 50 MW with 20 MW BESS Chipili and Mansa projects. Both projects will feed into the northern circuit of Zambia's energy network. During the first quarter of 2021, SAEP facilitated introductions between CGM and Climate Fund Managers (CFM) for potential cooperation and funding participation by CFM On 11 August 2021, the Zambia Development Agency (ZDA) approved an investment promotion and protection agreement that will open discussions with the Zambian revenue authority to open up potential tax incentives CGM developed a Developer Assessment Criteria: Potential Equity Partner Questionnaire. This questionnaire will be shared with potential developers to complete and submit. CGM will use the questionnaire to access various important project items such as: • Legal Status and Administrative Compliance • Technology leverage • Technical and Project Implementation Experience • Financial Capacity • Investment Conditions • Indicative Tariffs ZPC will be the off-taker of the SPVs for 100% of the generated power. GCM will consider and forward a specific request to SAEP assistance in respect of potential areas of assistance	30-Jun-22

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				On 13 August 2021, a follow-up meeting was held between SAEP, CFM, CGM, and the Industrial Development Corporation (IDC) of Zambia. The meeting was informed that special purpose vehicles (SPVs) for each of Chipili and Mansa has officially been registered and they are each now official IPPs	
Ngonye Falls Hydro	Zambia	Hydro	180	SAEP Lead Transaction Advisor arranged a virtual introductory meeting between Western Power Company (WPC), InfraCo Africa, and Climate Fund Managers. Following the meeting, the entities will share more detailed information and will explore funding participation and potential further collaboration on the project.	30-Jun-22
Unika Wind Mphepo Power	Zambia	Wind	100	Mphepo Power's Managing Director, Mrs. Linda Thompson, is leading the development of the 90 MW Unika Wind Power Project in Zambia. In November 2019, Mphepo Power installed a 120-meter meteorological mast to measure the wind potential for the wind power project. The Implementation Agreement (IA) needs to be concluded whereafter unsolicited PPA negotiations with ZESCO can officially begin. Following discussions between the SAEP Lead Transaction Advisor and Mrs. Thompson during the reporting period, it was stated that negotiations are progressing with the government agreements. The Implementation Agreement (IA) has been marked up and Mphepo is awaiting the new Minister to formally send the IA to. The Environmental and Social Impact Assessment (ESIA) is progressing and is awaiting final ESIA consultation which they hope to present to the Zambian Environmental Management Authority (ZEMA) in the next two months. The land restitution framework (LRF) has been completed	31-Mar-23

Project name	Country	Technology	Project size [MW]	Current Status	Estimated Financial Close Date
				and the wind energy output analysis revised layout is in the process of optimization. Mphepo is not currently formally engaging in respect of wheeling of the power as they have not obtained clarity on bilateral PPAs and hence the required wheeling path is not known. SAEP introduced Africa Trade Insurance Agency (ATI) as a possible financier to the project. ATI however still wanted to allow some time for the elections and any election-related implementation actions before they get involved.	

APPENDIX D TRANSACTIONS REACHED FINANCIAL CLOSE

The projects listed below are projects that have reached FC during the life of the project, as at the end of Year 4.

Code	Project Name	Country	Technology Used	MW	Project Sponsor	Financial Intermediary	Date of Financial Closing	Risk Mitigation Tools	Female Ownership
				YEAR 1					
TR-SA-036	Aggeneys Solar	South Africa	Solar PV	40.00	Biotherm	Nedbank	23-Jul-18	Sovereign Guarantee	No
TR-SA-063	Bokamoso Solar Park	South Africa	Solar PV	67.90	SunEdison	ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-094	Copperton Wind Farm	South Africa	Wind	102.00	Gestamp	Standard Bank	31-Jul-18	Sovereign Guarantee	No
TR-SA-062	De Wildt Solar Park	South Africa	Solar PV	50.00	SunEdison	ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-061	Droogfontein 2 Solar Park	South Africa	Solar PV	75.00	SunEdison/Old Mutual	Nedbank	23-Jul-18	Sovereign Guarantee	No
TR-SA-100	Dyason's Klip 1	South Africa	Solar PV	75.00	Scatec Solar	Standard Bank	4-Apr-18	Sovereign Guarantee	No
TR-SA-101	Dyason's Klip 2	South Africa	Solar PV	75.00	Scatec Solar	Standard Bank	4-Apr-18	Sovereign Guarantee	No
TR-SA-034	Excelsior Wind	South Africa	Wind	31.90	Biotherm	Nedbank	23-Jul-18	Sovereign Guarantee	No
TR-SA-099	Garob Wind Farm	South Africa	Wind	135.90	Enel	Nedbank/ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-033	Golden Valley Wind	South Africa	Wind	117.72	Biotherm	Nedbank	23-Jul-18	Sovereign Guarantee	No

Code	Project Name	Country	Technology Used	MW	Project Sponsor	Financial Intermediary	Date of Financial Closing	Risk Mitigation Tools	Female Ownership
TR-SA-058	Greefspan PV Power Plant No. 2 Solar Park	South Africa	Solar PV	55.00	AE AMD/ SunEdison	ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-024	Kangnas	South Africa	Wind	136.70	Lekela/Mainstream	ABSA	30-May-18	Sovereign Guarantee	No
TR-SA-020	Karusa Wind Farm	South Africa	Wind	139.80	Enel	Nedbank/ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-035	Konkoonsies II Solar	South Africa	Solar PV	75.00	Biotherm	Nedbank	23-Jul-18	Sovereign Guarantee	No
TR-SA-098	Kruisvallei Hydro	South Africa	Hydro	4.70	H1 Capital, Building Energy	RMB	31-Jul-18	Sovereign Guarantee	No
TR-SA-097	Ngodwana Energy	South Africa	Biomass	25.00	Sappi	Nedbank/ABSA	12-Apr-18	Sovereign Guarantee	No
TR-SA-067	Nxuba Wind Farm	South Africa	Wind	138.90	Enel	Nedbank/ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-021	Oyster Bay Wind Farm	South Africa	Wind	140.00	Enel	Nedbank/ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-025	Perdekraal East	South Africa	Wind	107.76	Mainstream	ABSA	30-May-18	Sovereign Guarantee	No
TR-SA-066	Roggeveld	South Africa	Wind	140.00	Building Energy	RMB	4-Apr-18	Sovereign Guarantee	No
TR-SA-095	Sirius Solar PV Project One	South Africa	Solar PV	75.00	Scatec Solar	Standard Bank	4-Apr-18	Sovereign Guarantee	No
TR-SA-022	Soetwater Wind Farm	South Africa	Wind	139.40	Enel	Nedbank/ABSA	31-Jul-18	Sovereign Guarantee	No
TR-SA-043	Waterloo Solar Park	South Africa	Solar PV	75.00	SunEdison	ABSA	31-Jul-18	Sovereign Guarantee	No

Code	Project Name	Country	Technology Used	MW	Project Sponsor	Financial Intermediary	Date of Financial Closing	Risk Mitigation Tools	Female Ownership
TR-SA-023	Wesley-Ciskei Wind Project	South Africa	Wind	32.70	Innowind	Standard Bank	4-Apr-18	Sovereign Guarantee	No
TR-SA-041	Zeerust Solar Park	South Africa	Solar PV	75.00	SunEdison/Old Mutual	Nedbank	31-Jul-18	Sovereign Guarantee	No
					YEAR 2				
TR-SA-073	Loeriesfontein Orange (Sol Cap orange)	South Africa	Solar PV	75.00	Solar Capital	Standard Bank	31-Dec-18	Sovereign Guarantee	No
TR-MW-022	Salima Solar	Malawi	Solar	60.00	JCM Power	100% Equity	30-Jun-19	Sovereign Guarantee	No
					YEAR 3				
TR-SZ-016	EEC Lavumisa Solar	eSwatini	Solar	10	CONCO, Consolidated Infrastructure Group Limited	Eswatini Pension Fund and local banks	31-Aug-19	N/A	No
TR-MW-024	Nkhotakota Solar	Malawi	Solar	26	Phanes Group	OPIC	31-Dec-2019	Sovereign Guarantee	No
	Angola-South Central Transaction	Angola	Transmission	1,000	RNT	AfDB	8-Sep-2020	Sovereign Guarantee	No
					YEAR 4				
TR-MZ-044	Temane Transmission Project (TTP)	Mozambique	Transmission	900	EDM	World Bank, Norwegian Trust Fund, AfDB, IsDB, OFID	10-Dec-20	Sovereign Guarantee	No

Code	Project Name	Country	Technology Used	MW	Project Sponsor	Financial Intermediary	Date of Financial Closing	Risk Mitigation Tools	Female Ownership
TR-MW-027	Malawi-Mozambique Interconnector	Malawi	Transmission	1,000	ESCOM	World Bank	31-Jul-20	Sovereign Guarantee	No
TR-MW-023	Golomoti Solar PV	Malawi	Solar PV	20	JCM	100% equity	31-Dec-20	Sovereign Guarantee	No
TR-SA-014	Redstone Concentrated Solar Power (CSP)	South Africa	Solar	100	ACWA Power	AfDB, ABSA, DBSA, CDC Group, Nedbank, FMO, DEG, Investec Bank, Sanlam Life Insurance	10-May-21	Sovereign Guarantee	No
TOTAL				**5,321.38**					

APPENDIX E TRANSACTIONS REACHED COMMERCIAL OPERATION

The projects listed below reached COD in Year 4.

Project Name	Country	Technology Used	MW	Date of Commercial Operation
YEAR 3				
Tedzani III	Malawi	Hydro	5	8-Feb-20
Mapanga	Malawi	Diesel	20	8-Feb-20
Lilongwe B stations	Malawi	Diesel	8	8-Feb-20
Bokamoso Solar Park	South Africa	Solar PV	67.9	18-Sep-20
Droogfontein 2 Solar Park	South Africa	Solar PV	75	1-Sep-20
Dyason's Klip 1	South Africa	Solar PV	86	25-Feb-20
Dyason's Klip 2	South Africa	Solar PV	86	30-Apr-20
Sirius Solar PV Project One	South Africa	Solar PV	86	18-Feb-20
YEAR 4				
Excelsior Wind	South Africa	Wind	33	31-Dec-20
Golden Valley Wind	South Africa	Wind	120	31-Dec-20
Kangnas Wind Farm	South Africa	Wind	136.7	20-Nov-20
Nxuba Wind Farm	South Africa	Wind	140	31-Dec-20
Zeerust Solar Park	South Africa	Solar	75	31-Dec-20

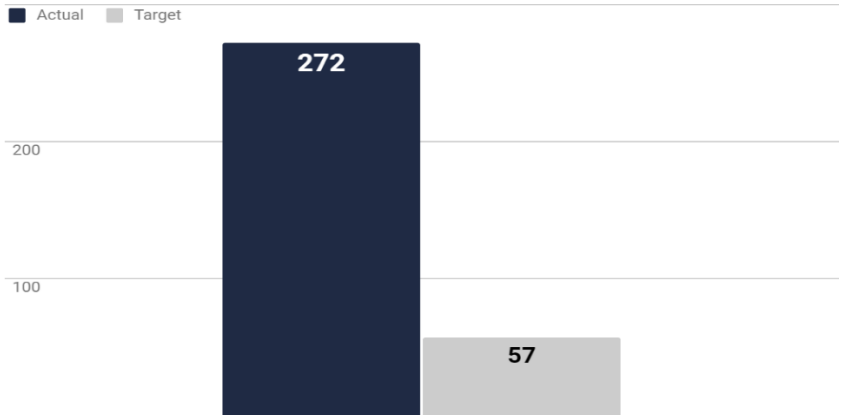
Project Name	Country	Technology Used	MW	Date of Commercial Operation
De Wildt Solar Farm	South Africa	Solar	50	23-Jan-21
Kruisvallei Hydro Project	South Africa	Hydro	4.7	25-Feb-21
Waterloo Solar PV	South Africa	Solar PV	75	21-Nov-20
Oyster Bay Wind Farm	South Africa	Wind	140	22-Jul-21
Wesley-Ciskei Wind Farm	South Africa	Wind	34.5	27-August-21
TOTAL			**1,484.5**	

APPENDIX F PARTICIPANT TRAINING REPORT

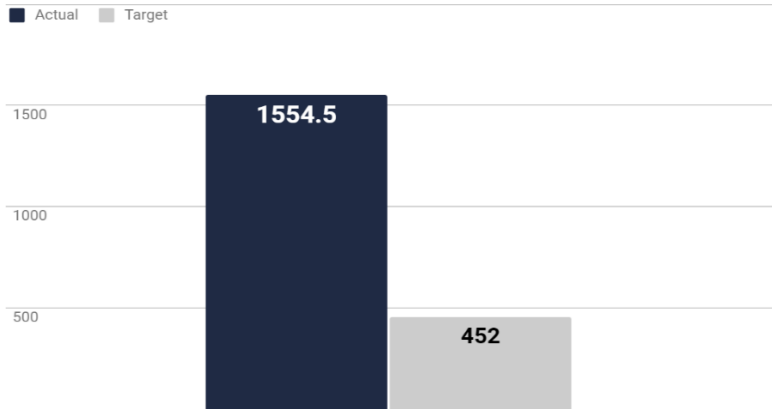
Country	Training & Capacity Building Activity	Date	Number of Males	Number of Females	Total Number of Participants	Hours of Training	Person-Hours of Training
Angola	Change Management Workshop with RNT	5 November 2020	25	5	30	4	120
Regional	SAPP Generic Production Optimization Model - Training 1	10 June 2021	19	3	22	4	88
Regional	SAPP Generic Production Optimization Model - Training 2	5 August 2021	10	7	17	16	272
South Africa	SALGA Project Finance Training - Session 1: Understanding of Project Finance & Power Project Risks	17 August 2021	22	7	29	2.5	72.5
South Africa	SALGA Project Finance Training - Session 2: Debt Financing & Equity Financing	24 August 2021	13	4	17	2.5	42.5
South Africa	SALGA Project Finance Training - Session 3: PPA: Energy & Capacity charges	31 August 2021	18	2	20	2.5	50
South Africa	SALGA Project Finance Training - Session 4: The Power Project Value Chain	14 September 2021	19	3	22	2.5	55
South Africa	SALGA Project Finance Training - Session 5: Principal Infrastructure Financing Models	21 September 2021	17	4	21	2.5	52.5
South Africa	SALGA Project Finance Training - Session 6: Municipal pitches of power projects	28 September 2021	13	4	17	2.5	42.5
South Africa	SALGA Revenue Management Training – Session 1: Meter reading and Billing	22 September 2021	42	18	60	7.5	450
South Africa	SALGA Revenue Management Training – Session 2: Cash Flow Management and Credit & Debt Management	29 September 2021	39	30	69	7.5	517.5
Total			**237**	**87**	**324**	**54**	**1,762.5**

DASHBOARD FOR FY21 ANNUAL RESULTS OF SAEP ORGANIZED TRAININGS

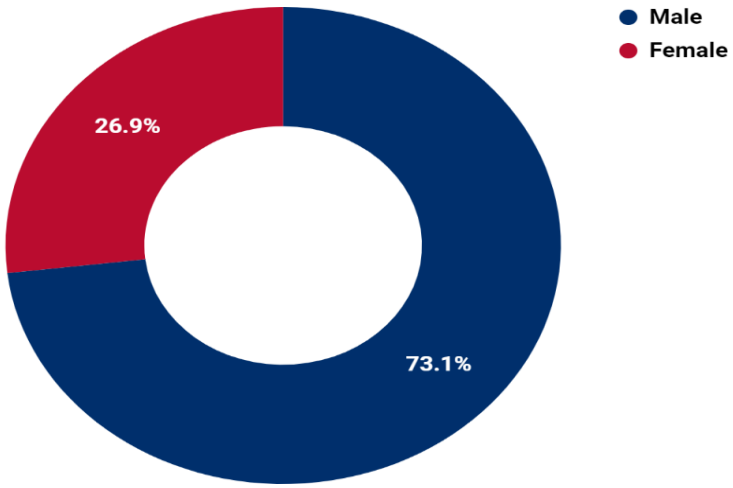
Number of People Receiving Training in FY21Q4 (Actual vs. Target)



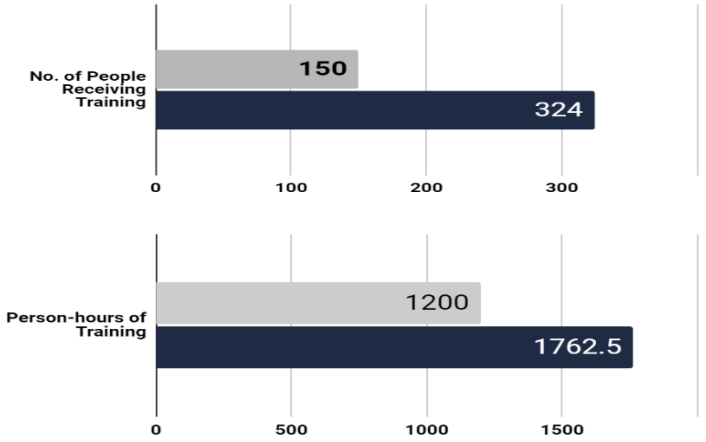
Person-Hours of Training in FY21Q4 (Actual vs. Target)



Gender Disaggregation of Training Participants in FY21



Performance to Date for FY21 Trainings Against the Annual Target



APPENDIX G ASSUMPTIONS FOR CALCULATION AND INVOICING OF FEE

Pursuant to section B.3 (f) of the SAEP contract, Deloitte will include earned fee on the periodic invoice immediately following the COR's final acceptance of the SAEP Quarterly Progress Report. Each quarter's earned fees will not exceed one-twentieth (5%) of the total fixed fee amount, or USD $242,427 per quarter. This includes a maximum of USD $151,517 for timely submission of all required deliverables during the quarter (Output Indicator #X), and USD $90,910 for meeting quarterly targets for three Impact Indicators (#Y, #AA, and #AB).

COR acceptance of the Quarterly Progress Reports will constitute acceptance of the performance indicator values included in the Performance Monitoring and Evaluation Tables presented as an Appendix to that report. With the exception of the first Quarterly Progress Report, which covered the period from program award to 30 June 2017, SAEP Quarterly Progress Reports will follow the US Government fiscal year.

RECONCILIATION OF DISPARATE PROJECT CALENDARS

At the request of USAID/Southern Africa, Deloitte prepared the SAEP Year 1 Work Plan that covers the period from program award on 15 March 2017 through the end of US Government Fiscal Year 2018. While this simplifies planning and reporting by aligning project years to the US Government fiscal calendar, it also has the effect of extending Project Year 1 to more than six fiscal quarters.

From Project Year 2 onward, the calendars for Quarterly Progress Reporting, invoicing of fee, and the Government fiscal year will all coincide. In Year 5, this will result in an abbreviated performance year, with only two quarters for program reporting and invoicing of fee.

TREATMENT OF QUARTERLY AND ANNUAL PERFORMANCE TARGETS

As indicated in SAEP's approved PMEP, target values for the four *Impact Indicators* are set on an annual basis. For purposes of quarterly reporting and calculation of fee, incremental performance targets for Quarters 1, 2 and 3 of each Program year are set at zero, and with Quarter 4 of the Program year carrying the full annual performance target. In the event Deloitte does not meet the annual performance target, fee may not be invoiced in subsequent quarters until that target is met. That is, Deloitte may not begin invoicing fee in Q1 of Year 3 if the annual performance target for Year 1 has not been met, even though the *incremental* performance target for the quarter is zero. **Error! Reference source not found.** Table 2 below summarizes the quarterly impact indicator targets for SAEP's Year 3.

Table 2: Quarterly Impact Indicator Targets, Program Year 4

Indicator	Disaggregation	FY21 Q1	FY21 Q2	FY21 Q3	FY21 Q4	FY 21 Total	Baseline & Rationale
#AA: Capacity (MW) from transactions supported by	• ***Country*** • ***Technology (separating***						0; targets based on transaction pipeline and experience with financial closure timelines and

Indicator	Disaggregation						
		FY21 Q1	FY21 Q2	FY21 Q3	FY21 Q4	FY 21 Total	Baseline & Rationale
SAEP that achieved financial closure	***transmission from generation)*** ****note when female ownership in developer consortium***	990	2.35	0	0	992.35	probabilities (includes transmission and generation capacity)
#AB: Direct Electricity Access: Number of new grid and off-grid actual direct connections	• ***Type of connection*** • ***Type of enterprise*** • ***Country***	105,333	192,765	364,058	364,059	1,026,215	0; number of new grid connections of off-grid access directly enabled based on OC4 technical work plan with implementation priority countries
#Y: Number of laws, policies, strategies, plans, or regulations, officially proposed, adopted, or implemented	• ***Country*** • ***Measure (Clean Energy standard)***[19]	2	0	0	0	2	0; targets set based on anticipated need for relevant laws, policies, strategies, plans or regulations in the region
#X: Submission of required deliverables as per Section F of the Contract	• ***Type and # of reports*** • ***Submitted or not submitted timely***	100%	100%	100%	100%	100%	0; For all Section F deliverables not including the trip reports and other reports which will be estimated later
#Z: Generation and Transmission capacity (MW) pending financial closure	***Country*** • ***Technology/ energy source*** • ***Transaction Stage*** ****note female ownership***	NA	NA	NA	NA	NA	Indicator measures new transactions added to the pipeline to equate to the total amount in the pipeline.

SETTING OF ANNUAL TARGETS IN SUBSEQUENT PROJECT YEARS

Recognizing the importance of balancing accountability with changing conditions over the extended period of performance, Deloitte and USAID/Southern Africa have agreed to set performance targets for select indicators annually. To enable that flexibility while maintaining accountability and intended incentives, Deloitte will submit proposed annual targets for the coming year in the Year 5 work plan. USAID/Southern Africa acceptance of the Year 5 Work Plan will constitute acceptance of proposed performance targets.

RECOVERING FEE IN THE EVENT OF UNDERPERFORMANCE IN A REPORTING PERIOD

Pursuant to B.3 (f) (5), fee amounts unbilled in a given period due to underperformance against targets are not permanently forfeited. With COR approval, these fees maybe recovered in subsequent periods, when Deloitte returns to meeting or exceedingly quarterly or year-to-date performance targets.

[19] Disaggregation: Drafted, Presented, Regional, National, Private Sector Participation, Clean and Cleaner Energy, Small-Scale and Off-Grid Investments, Gender Equity and Country

APPENDIX H STTA MOBILIZED AND UPDATE ON TRAVEL IN QUARTER 4

Table 3: STTA mobilized during the period 1 July 2021 – 30 September 2021

Resource	Role / Activity / Scope	Est. Start Date	Est. End Date
Inka Schomer	As the Gender Framework Specialist, Ms. Schomer will support RNT in the development of a gender framework with the goal of preventing and mitigating gender-based violence and improving opportunities for women related to the construction of the Central-South transmission line in Angola.	12 April 2021	30 September 2021
Sisanda Mqwebedu	As the Revenue Management Specialist, Ms. Mqwebedu will provide training to SALGA on Revenue Management.	23 August 2021	30 November 2021
Carla Sousa	As the IFI Procurement Specialist, Ms. Sousa will provide assistance to the RNT Procurement team and the RNT Project Coordinator. She will be working with the Procurement team to make sure all project activities and milestones are met and monitored; whilst also supporting procurement processes and following AfDB guidelines (and processes). She will also be assisting the RNT Project Coordinator with the Project Coordination Office, where she will be assisting in monitoring of all project activities being advanced by the other PIU sections.	2 September 2021	2 February 2022

Table 4: SAEP Team travel between 1 July 2021 and 30 September 2021

Dates	Location	SAEP Attendees	Plans / Meetings
24 September to 2 October 2021	Lilongwe and Mangochi, Malawi	3	Hendrik Pelser, Sebastian Deschler and Jorge Rodriguez from the Cross Boundary team traveled to Lilongwe and Mangochi to support the GoM during the evaluation bid for the project sponsor.
28 September to 01 October	Kazungula, Zambia	3	Chris Mubemba (Country Manager, Zambia) conducted a site visit with personnel from Avencion Zambia Limited and the Ministry of Health officials at the Kazungula Level 1 District Hospital. SAEP is providing technical assistance to Avencion on its project for the provision of power supply and back-up power supply through solar PV.

APPENDIX I ORGANIZATIONAL CHART & RESOURCES

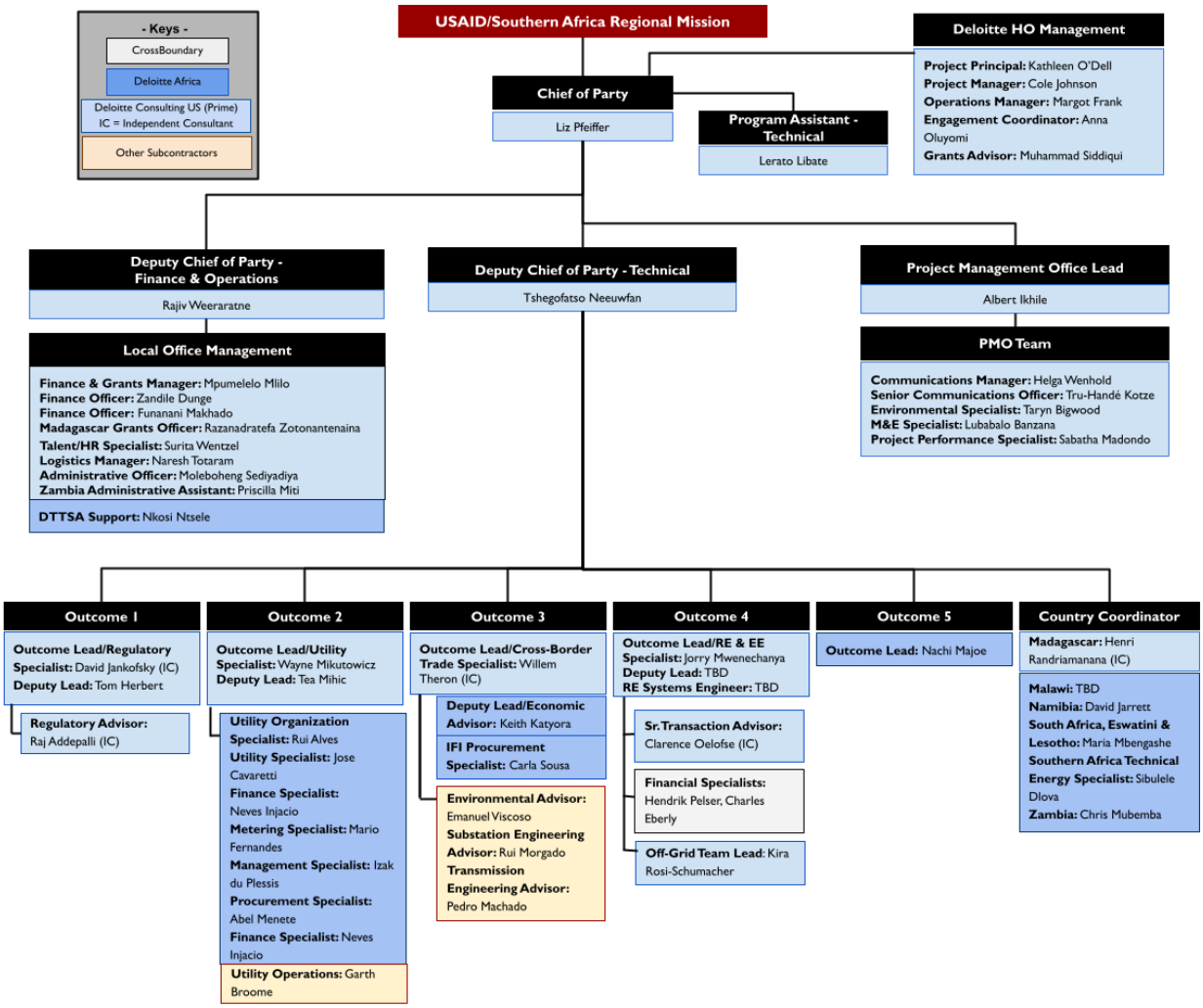


Figure 21. SAEP Organizational Chart as of 30 September 2021

APPENDIX J DETAILED ACTIVITIES PROGRESS

OUTCOME–SPECIFIC ACTIVITIES

Below are the outcome-specific activities from the Year 4 Work Plan. This table is to track the status of the activities and to highlight any activity changes, timing changes or other major items related to activities that SAEP would like to highlight for the period.

OUTCOME 1

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Intervention 1.01							
ANGOLA							
Y4.01.01.02.ANG	IRSEA: Plan to Eliminate Subsidy for Electricity by 2025	David Jankofsky	08/16/2021-09/30/2021	IRSEA Request	Y3.01.01.01.ANG - Angola Roadmap for regulator enhancement	• Completion of subtasks and ultimate migration plan to eliminate subsidies	**In progress, continuing in Year 5:** This is the fourth task as set out in the Year-3 developed 'Angola Roadmap for Regulator Enhancement'. As such, IRSEA was not ready yet for this activity to be completed in Year 4. Regular engagement with IRSEA throughout August and September 2021 confirmed that the regulator requires SAEP's support related to reducing tariff subsidies in Angola. At the conclusion of Year-4 this SOW is presently with IRSEA for their review and comment.
Y4.01.01.03.ANG	IRSEA: Receive Briefing from Prodel, RNT, ENDE on Plans	David Jankofsky	06/01/2021-07/31/2021	IRSEA Request	Y3.01.01.01.ANG - Angola Roadmap for regulator enhancement	• Report on Briefing Results and Possible Follow Up Action Plan	**Completed**: The originally intended deliverable was to support and guide IRSEA in practically receiving briefings from the licensed utilities in Angola. However, upon commencing this activity, IRSEA indicated that there had recently been new communications/hearing regulations put in place for this purpose; Regulamentos de Comunicações (Decree 45/21 of February 22, 2021). Decree

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							45/21 establishes the reporting requirements between licensees and IRSEA, and the regulator requested SAEP's assistance in reviewing those rules. During Year-4, SAEP reviewed Decree 45/21 and presented IRSEA with a report containing five recommendations, which at the conclusion of Year-4 IRSEA were generally in agreement with, whilst indicating that there are administrative and financial hurdles to their full implementation in the near-term. The rationale for the change in approach to this activity is two-fold; 1. Whilst the original roadmap of activities was drafted in February 2020, the regulations came into effect between the time of planning the activity and implementing it. At IRSEA's request, the review of the regulation was added to the scope; and 2. These regulations were only in effect as at Q1 of 2021. The fiscal year in Angola runs from January to December. In terms of the regulations, the licensed utilities are required to provide financial and operational reports to IRSEA within a set time period after the conclusion of the fiscal year (some timelines are 90 days, whilst others are as much as 150). As such, the presentation of this information will only be legally required around Q2 of 2022.The most important recommendation that SAEP presented in its Year-4 report

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							on this activity is that; following the receipt of these reports as required by the regulations, IRSEA must hold formal and public discussion sessions with all of the regulated utilities. A Year-5 activity is planned through which SAEP intends to provide follow-up support on this activity to promote the implementation of SAEP's recommendations, at the appropriate time in terms of the law in Angola.
ESWATINI							
Y4.01.01.13.SWA	Support to ESERA with Connection Charges	David Jankofsky	04/09/2021 – 07/23/2021	ESERA Request	N/A	• Document reviewing the current state of affairs and providing ESERA with recommendations.	**Completed:** SAEP supported ESERA in determining whether the EEC practices for connection charges conformed to ESERA's 2019 guidelines and on how the connection charges should be developed to conform with the guidelines, SAEP completed and shared a report with ESERA on 11 August 2021. This report included an analysis of the approach taken by the EEC with specific focus on transparency, understandability and conformity to ESERA's 2019 connection charge guidelines and provides ESERA and the EEC with a model by which to calculate connection charges in conformance with ESERA guidelines. Additionally, SAEP set forth alternative methods to imposing connection charges.

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Y4.01.01.14.SWA	Support to ESERA with the Development of a Mini/Off-grid Regulatory Framework	David Jankofsky	05/04/2021-09/30/2021	ESERA Request	N/A	• Report evaluating ESERA's ToRs • Reviews (reports and recommendations) on deliverables, as required	**In Progress, continuing in Year 5:** SAEP completed task 1, the reviewing of the Terms of Reference (TORs) for the ESERA-appointed consultant, and shared its recommendations with ESERA on 13 May. The first deliverable under task 2; an Inception Report, was submitted by the ESERA-appointed consultant on 19 July. As requested, OC1 conducted a review of the report and provided written feedback to ESERA on 30 July. Further, on 15 September SAEP provided written responses to a questionnaire on mini-grid regulation as developed and shared by the consultant in August 2021. SAEP's support under this activity will continue into Year-5 as required.
MOZAMBIQUE							
Y4.01.01.11.MOZ*	ARENE Institutional Framework Development	Ernesto Johannes, Marzio Moura	10/01/2020-09/30/2021	Continuation of SPEED+ TA	Y3.01.05.01.MOZ	• A concise manual and a checklist(s) which ARENE can use in the evaluation of PPAs between renewable energy (and other) IPPs and the off-taker utility in Mozambique; and • High-level guidelines to be used for evaluating the prudence of energy infrastructure investments in the country •	**In progress, continuing in Year 5:** This activity entails the development of a manual and a checklist(s) which ARENE can use in the evaluation of PPAs between renewable energy and other IPPs and the off-taker utility in Mozambique. Towards the conclusion of Year-4, SAEP produced a draft version of the manual, which is under internal review and so this activity will carry-over into Year-5.
REGIONAL							

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Y4.01.01.05.REG*	Regional Battery Services Regulation	David Jankofsky, Tom Herbert	10/1/2020 - 08/31/2021	SAEP Initiative Follow-on/Expansion of Year-3 activity	Y3.01.01.10.RSA - Approach to battery storage rules	• Develop a regional "guide" to provide regulatory options to regulators. Starting point will be the Namibian report, made generic for the Southern Africa region • Webinar sharing report and insights with regulators	**Completed:** This activity involved the development of a white paper on Battery Services regulation that can be referenced and possibly influence thinking for regulatory authorities in the region. The rationale for this report is to allow authorities to develop a reasonable regulatory environment for users of batteries and battery services will increase MW and connections. At the end on Year 4, this report has been undergoing an internal SAEP review process.
Y4.01.01.07.REG	Rate Case Guide Dissemination	David Jankofsky	10/1/2020 - 07/31/2021	SAEP Initiative	Y3.01.01.08.REG - Rate Case Processing Guide - Outcome 5	• Webinar developed from the Rate Case Guide	**Completed:** In November 2020, SAEP completed a guide titled "Common Issues in the Evaluation of Applications for Changes in Tariffs", a document that discusses issues encountered in four actual utility -tariff applications on which SAEP worked directly with regulatory authorities in Southern Africa. SAEP has shared the main report, a draft cover letter and a draft contact list for wider dissemination with USAID for their review.
Y4.01.01.12.REG	Evaluation of Regulatory Independence	David Jankofsky	10/01/2020 - 09/30/2021	SAEP Initiative	Y3.01.01.09.REG	• Evaluation of independence of regulatory counterparts in SAEP resulting in a report that counterparts can use if desired to enhance regulatory independence	**Completed:** This activity involves an evaluation of independence of regulatory counterparts in the SADC region using critical criteria selected by SAEP that will result in a report that counterparts can use to enhance their regulatory independence. At the conclusion of Year-4 this report is now complete and undergoing USAID final review

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							and SAEP will need to work to disseminate to regulators.
Intervention 1.04							
BOTSWANA							
Y4.01.04.03.BWA*	Follow up on BPC 100 MW solar support	Christine Covington	10/1/2020 - 09/30/2021	Continuation of activity delayed from Years 2 and 3	Y2.01.04.13.BWA	• Assistance to BPC in developing and implementing the procurement program	**Completed:** At the conclusion of Year-4 there has been little change in the status of this activity, with BPC remaining unresponsive to SAEP's request and offers of support. July 2021 media reports shared information on the award of a 100 MW Solar IPP contract in Botswana, but BPC has yet to officially reveal updated details of the evaluation progress as of 30 September 2021.
ESWATINI							
Y4.01.04.01.SWA	Support Eswatini Procurement Tranches	Tom Herbert	10/01/2020-09/30/2021	SAEP Initiative Follow-on/Expansion of Year-3 activity	Y3.01.04.01.SWA	• Assistance to ESERA in adhering to the timelines for Procurement Tranches 1 (Solar PV) and 2 (Biomass) – both 40 MW	**Completed:** In August 2021, ESERA confirmed that while a total of three 15 MW solar projects had been selected as preferred projects, the award of the tender was delayed following an objection by one of the bidders and the subsequent review proceedings. At the conclusion of Year-4, support under this activity is complete. SAEP stands by for any additional support ESERA may require, including recommendations on the approach ESERA can take going forward (either pursue an appeal or submit to the ruling and relaunch the RFP process), which advises that ESERA should pursue the approach which will be most expeditious.
ZAMBIA							

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Y4.01.04.02.ZMB*	Zambia One-Stop-Shop	Chris Mubemba	10/1/2020 - 09/30/2021	Continuation of activity delayed from Years 2 and 3	Y3.01.04.04.ZMB	• Support to the European Union's Increased Access to Electricity and Renewable Energy Production (EU/IAEREP) Team and Lead Consultant, Mr. Azem Kastrati	**In progress, continuing in Year 5:** SAEP continues to support the EU's IAEREP Program in its analysis and potential implementation of a 'One-Stop Shop', aimed at assisting potential IPP developers to more easily bring projects in Zambia to fruition. At the conclusion of Year-4 SAEP stands by to support the EU with conducting a virtual workshop and country tour that will allow the OSS Working Group to engage directly with countries who have implemented such OSS programs. Both the continued impact of the COVID-19 pandemic and national elections in Zambia in Q4 have meant that this virtual event has been delayed until later in 2021, with a set date still to be determined.
Intervention 1.01							
SOUTH AFRICA							
Y4.01.01.15.RSA*	Provide SALGA with training on PPP approaches for infrastructure project development	David Jankofsky, Thomas Herbert, Sibu Dlova	06/01/2021-09/30/2021	SAEP Initiative and SALGA Request	N/A	• Training material and report	**In progress, continuing in Year 5:** Engagement between SALGA and SAEP throughout Q3 and Q4, resulted in the development of invitation letters/questionnaires for SALGA members, as well as a draft SoW for consultant's delivery. Tentative dates for the training are set for January 2022. As such, SAEP's support under this activity will continue into Year-5.

OUTCOME 2

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Intervention 2.03							
MALAWI							
Y4.02.03.03.MWI	EGENCO Strategic Plan and HR Performance Review	Wayne Mikutowicz, Erik Spurgin	04/01/2020-07/14/2021	Continuation from Y3	OC5	• Report	**Completed:** In Y4, SAEP conducted a number of coordination meetings and a guidance session, to assist EGENCO HR team in advancing the HR organization, and EGENCO submitted the batch of documents for the assessment. SAEP finalized the assessment and the final report as part of the close-out of the activity, after which EGENCO will proceed independently with maintaining and building on the foundations SAEP assistance put in place.
Y4.02.03.06.MWI	PML Single Buyer Operational Planning Support	Wayne Mikutowicz, Tea Mihic, Garth Broome	05/31/2021-09/30/2021	PML request	N/A	• Compliance Register • Report – International Review • Draft Operating Plan • Process Review report	**In progress, continuing in Year 5:** The activity commenced in Q3, after a number of alignment meetings between SAEP and the Single Buyer, Power Market Limited (PML). SAEP drafted a comprehensive Compliance Register for the Single Buyer Malawi and introduced it through a workshop with PML Technical Director. Based on the requirements identified in the Compliance Register, a series of process flow diagrams for the operational activities have further been developed and discussed with PML.
Y4.02.03.07.MWI	PML Single Buyer Resource Planning Support	Wayne Mikutowicz, Tea Mihic, Garth Broome	06/21/2021-08/20/2021	PML request	N/A	• Task 1 report • Task 2 report • Workshops	**Moved to Year 5:** Not yet commenced. This activity will commence after the PML Operational Planning Support (Y4.02.03.06.MWI) activity concludes

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Intervention 2.05							
MOZAMBIQUE							
Y4.02.05.01.MOZ*	EDM Loss Reduction	Wayne Mikutowicz, Jose Cavaretti	11/1/ 2020-9/30/2021	Requested by the Counterpart	N/A	• Loss reduction model, Management and governance process • Training on loss models • Management reports • Quality assurance reviews	**Completed**: In Y4, SAEP commenced with assisting EDM to reduce commercial losses and improve commercial viability. After the initial in-depth assessment of commercial loss measurement at EDM, SAEP team conducted a review with the newly established Revenue Protection Directorate and additional EDM departments. Subsequently, technical meetings during Q3 with EDM departments involved estimating commercial losses. SEAP team has completed the EDM commercial losses' analytics tool which was reviewed and approved by the EDM BoD. A new phase of loss reduction work will be carried out in Year 5
Intervention 2.08							
REGIONAL							
Y4.02.08.01.REG*	Credit Rating White Paper	Wayne Mikutowicz, Izak du Plessis	03/29/2021 08/27/2021	Requested by USAID	N/A	• Talking points and communication material (potentially white paper) to discuss with utilities and regulators on the importance of ratings for financial sustainability. • Mapping of the steps for shadow credit rating	**In progress, continuing in Year 5:** In Year 4, SAEP commenced and completed the desktop study with focus on the financial sustainability of utilities in the region, its impact on credit rating, and implications of the credit rating on both utilities and regulators in Southern Africa. While the report is complete, dissemination will occur in Year 5
Intervention 2.09							
ANGOLA							

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Y4.02.09.01.ANG*	ENDE bid evaluation support for AfDB program	Wayne Mikutowicz, Rui Alves, Tea Mihic	10/1/2020 - 09/30/2021	Continuation from Y3 (originally requested by the Counterpart)	N/A	• Bidder evaluation report • Final close-out report – summary, lessons Report • Metering bidder prequalification report • Metering bidder evaluation reports • Revenue protection Prequalification report • Revenue protection learned	**In progress, continuing in Year 5:** In Year 4, AfDB approved the ENDE–RNT integrated procurement plan and the System Tender evaluation report, also shortlisted 6 companies and gave a go-ahead to ENDE to prepare the Request for Proposal to be issued to the shortlisted bidders. SAEP also supported ENDE on two additional tenders, which were submitted to AfDB for NO Objection: Supervision Consulting Services and recruitment Consulting Company for Translation and Interpretation Services (Portuguese–English–Portuguese) for ENDE and RNT
~~Y4.02.09.02.ANG*~~	~~ENDE Phase 2 Electrification Coordination Unit (ECU)~~	~~Tea Mihic/ Rui Alves~~	~~2/3/2020 - 10/29/2021~~	~~Requested by Counterpart, re-prioritized and rescheduled to Y4~~	~~Y3.02.09.02.ANG~~	~~• GAP Assessment Report; Design of ECU; Implementation of ECU/ Training; Report~~	**Removed:** This activity will not be proceeding per the defined SOW, due to a number of high-priority ENDE engagements with AfDB and WB programs, and therefore unavailability of ENDE to work on the ECU. An alternative, more focused activity has been formulated for Y5, based on the discussion with ENDE.
Y4.02.09.03.ANG*	Support to ENDE for the World Bank Program	Tea Mihic, Rui Alves	8/17/2020 - 6/30/2021	ENDE Request	NA	• Report • Procurement plan • Bidding documents • Capacity building for the PIU team	**In progress, continuing in Year 5**: In Year 4, SAEP supported ENDE in preparation of the bidding document and the TOR for the WB Revenue Protection Program Tender, also facilitated ENDE - SAEP workshops for technical teams, to ensure an alignment in the TOR content. Furthermore, SAEP supported ENDE in their alignment meetings with the

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							Project Coordination Unit (PCU) team for the WB Program, which is established in MINEA. Once MINEA PCU Procurement Specialist deems the documents ready, the TOR and the bidding document will be submitted by the PCU to WB for No Objection, and the liaison with the WB team is foreseen to be taking place in Y5 Q2.
MOZAMBIQUE							
Y4.02.09.04.MOZ*	EDM EMU program implementation support continued	Wayne Mikutowicz, Rui Alves	03/15/2021 09/30/2021	EDM Request	Continuation from Y3	• Capacity building plan • Implementation of functional processes • Quality assurance reviews • Biweekly report status updates on progress • Final close-out report	**In progress, continuing in Year 5:** SAEP supported EDM to integrate the approach of the operationalized EMU with the ongoing improvement in the customer engagement and management services, through the HCD Customer Experience Implementation intervention (also known as HCD Phase -2). After EDM EMU and HCD Phase -2 activities were integrated, the initial focus was placed on the HCD Phase -2 and its pilot. The continuation of the EDM EMU is dependent on the completion of the pilot stage of the HCD Phase-2, and is envisaged to continue in Y5 Q2.
Y4.02.09.05.MOZ	EDM HCD customer experience implementation	Wayne Mikutowicz, Rui Alves	03/15/2021 09/30/2021	EDM Request	OC5	• Report • Pilot development and evaluation report (results, conclusions, review of the solutions, recommendations for the roll-out) • Set-up a task force, an implementation and change management plan and governance	**Completed:** SAEP piloted the three solutions developed in Phase I through the engagement of the two delegations, to represent two different realities - rural and peri-urban. SAEP supported EDM in commencing with the pilot of the project. Kick-off meetings were successfully conducted by EDM (supported by SAEP) and the Delegations'

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
						• Roll out program designed and approved by the BoD. Task force capacitated to conduct a training program at all delegations • Final report – summary of activities and results achieved.; lessons learned and way forward	pilot teams onboarded in terms of the pilot requirements. SAEP continues supporting and monitoring the rollout. The results of the pilots were presented to the Commercial Director and Board Member, Mr Francisco Inroga and were well received. EDM is now preparing to present the findings to the EDM Board, in Y5 Q1.

OUTCOME 3

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Intervention 3.01							
REGIONAL							
Y4.03.01.01.REG	Continue to provide support to the finalization of SADC's Protocol on Energy	Keith Katyora	10/1/2020 - 9/30/2021	SADC Request	Y3.03.01.01.REG Y2.03.01.05.REG	• Updated Protocol • Meeting notes	**Stalled:** No activity happened during Year 4.
Y4.03.01.02.REG	Participating in SADC ETG meetings and SAEP Advisory Committee	Willem Theron	9/30/2020 - 9/30/2021	SAEP Initiative	OC5 & Y3.03.01.02.REG	• Notes of meetings every six months	**Completed for Year 4:** During Y4 SAEP attended the May ETG meeting where status updates were presented on all activities, focusing primarily on the activities with huge regional impact
Intervention 3.02							
REGIONAL							
Y4.03.02.01.REG	Maintain and enhance a generic system optimization model for SAPP	Keith Katyora, Michael Barry	10/1/2020 - 9/30/2021	SAEP Initiative	Y2.03.05.02.MWI, Y3.03.05.02.MWI	• Production optimization model updates	**Completed:** SAEP conducted two training sessions for the SAEP member utilities. The

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
						• Close-out report with any updates provided	primary goal of the sessions was to introduce the methodology behind the production optimization tool and assist them with implementing the tool according to their utility specifications. Both sessions were well received.
Intervention 3.04							
REGIONAL							
Y4.03.04.01.REG	Support SAPP in the rollout of new access guidelines	Willem Theron or Mark Sims	9/30/2020 - 10/1/2021	SAPP Request and LOC	Y3.03.04.01.REG Y2.03.04.01.REG	• Presentation materials to support SAPP in promoting and marketing the new access guidelines	**Completed:** SAEP finalized and submitted the new access guidelines to SAPP. This was after the document went through SAEP internal review process. The next step is for SAPP to publish these guidelines on their website for prospective new members.
Intervention 3.05							
ANGOLA							
Y4.03.05.01.ANG*	Assist RNT to operationalize a PIU for the Central–Southern 400 kV project	Willem Theron	10/1/2020 - 9/30/2021	USAID, RNT and AfDB request	Y3.03.05.01.ANG	• 100- and 365-day rolling plan for PIU • PIU operationalization documents, including comments on procurement review reports created by RNT • Procurement plan • Risk, issues and action log • Presentations on internal workshops and training to support RNT PIU • Biweekly and quarterly progress reports	**In progress, continuing in Year 5**: In Y4 SAEP continued to work with the RNT PIU. All deliverables listed have been completed. RNT recruited five new specialists. The TORs and REOIs for four of the five specialists received NO objection from the AfDB. On engineering, SAEP continued with technical working sessions, for substations and transmission. The assistance also has primarily focused on skills transfer and training. On Environmental and Social, SAEP assisted RNT with the development of the Gender Action Plan and the

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							Environmental License was issued during this Quarter.
Y4.03.05.02.ANG*	Assistance on the Angola-Namibia interconnector, providing assistance and advice to RNT on the commercial contract negotiations associated with ANNA	Willem Theron, Keith Katyora	10/01/2020-09/30/2021	SAEP initiative	Y3.03.05.01.ANG	• Status and continuous updates to SAEP internal team and RNT	**Moved to Year 5:** This activity did not start in Year 4 as the focus had to be on the RNT PIU assistance on the ESEEP I project, and will commence in Year 5.
Intervention 3.05							
MALAWI							
Y4.03.05.05.MWI	Prepare ESCOM personnel for operating in an interconnected system by introducing them to the SAPP CC and other SAPP utilities operating in the interconnected system	Mark Sims	10/1/2020 - 9/30/2021	ESCOM LOC	OC5 & Y3.03.03.01.MWI	• Meeting notes • Training materials • Training/close-out reports	**Completed except travel:** In Year 4, SAEP concluded Phase 1 of the training which focused on the theoretical component of the training. The initial plan was also to do Phase 2 during the same year, which focused on site visits to two of the operating SAPP utilities and also the SAPP head office. The plan now is that in Year 5 this activity should be concluded, as travel embargos reduce
Intervention 3.06							
REGIONAL							
Y4.03.06.01.REG*	Assistance to SAPP for Regional Transmission Infrastructure Fund (RTIFF)	Willem Theron, Keith Katyora and Financial Advisors	10/1/2020 - 9/30/2021	SAPP and World Bank request	Y2.03.06.01.REG Y3.03.06.01.REG	• Advisory notes to SAPP • Feedback reports to stakeholders involved in the project (as requested by SAPP)	**In progress, continuing in Year 5:** In Y4, SAEP continued to offer advisory support to SAPP and their consultant, Pegasys (who are being supported by Zutari and Cliffe Dekker Hofmeyr), to advance the development of the RTIFF. The main focus for Y4 was providing inputs into the RTIFF financial model, the RTIFF Institutional blueprint and the TOR of the second phase of the RTIFF development. In Year 5, SAEP will be joining the official RTIFF Oversight Committee, as the focus will

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							be on the socialization of the institution across the region.

OUTCOME 4

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Intervention 4.01							
NAMIBIA							
Y4.04.01.02.NAM*	TA to CENORED for procurement of energy from new solar plants	Clarence Oelofse	10/1/2020 - 9/30/2021	CENORED Request	Y3.04.01.03.NAM	• Recommendations on how to get developers to lower their tariffs and/or combine their offers with battery storage	**Completed:** As a result of SAEP's support, CENORED issued an Expression of Interest (EoI) for alternative energy sources (mainly from solar PV or Solar PV plus battery installations). The EoI was issued on 5 May 2021 and closed on 17 June 2021. By the end of the financial year, CENORED was in the process of wrapping up the evaluation process and presenting the results to their EXCO and Board. The support to CENORED as they implement the final procurement stage will continue in Year 5
MADAGASCAR							
Y4.04.01.03.MDG	Ad-hoc TTS for energy companies in Madagascar	Henri Randriamanana	03/15/2021-12/30/2021	SAEP Initiative	Y4 Madagascar Activities	• Biweekly and quarterly reports	**In progress, continuing in Year 5:** No significant activity during this quarter. A number of private sector entities, such as WeLight, had expressed an interest in receiving assistance from SAEP but this interest had not turned into concrete activities by the end of Year 4. SAEP will continue with efforts to support private sector entities in Year 5, especially those that are planning to initiate or scale off-grid activities

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
MALAWI							
Y4.04.01.04.MWI*	Transaction advisory services on Mpatamanga project	Cross Boundary, Jorry Mwenechanya	10/1/2020 - 9/30/2021	GoM and IFC Request	OC1.04	• Quarterly progress reports • Development • Agreements concluded • Financial close achieved	**Completed for Year 4:** At the end of the financial year, the Government of Malawi was in the process of evaluating a bid they had received from the preferred project sponsor, a consortium between Scatec (formerly SN Power) and EDF. The bid was received on 17 September 2021. The role of the project sponsor will be to develop, finance and operate the large-scale 350 MW Mpatamanga hydropower project. SAEP has played a pivotal role in supporting the Government of Malawi through the procurement process and will continue to do so in Year 5
SOUTH AFRICA							
Y4.04.01.05.RSA*	Sasol 600MW RE IPP Transaction Advisory	Clarence Oelofse	03/01/2021-01/31/2022	SASOL and SAEP Initiative	N/A	• Quarterly progress reports; Comments on procurement documents, process, timelines, and SASOL-IPP commercial / contracting structure	**On Hold:** The support and assistance from SAEP is not required by SASOL., and SASOL will revert back to SAEP if the situation changes.
Y4.04.01.06.RSA*	Accelor Mittal 150MW RE IPP Transaction Advisory	Clarence Oelofse	03/01/2021-01/31/2022	SAEP Initiative	N/A	• Quarterly progress reports; Comments on documents and process	**On Hold**
Y4.04.01.07.RSA*	Assist municipalities with an understanding of Project Finance principles used in IPP financing	Clarence Oelofse, Sibulele Dlova	06-01-2021 – 09/30/2021	SAEP Initiative and SALGA Request	OC5	• Training material and report	**Completed:** The six training sessions took place from 17 August - 28 September. A total of 125 officials representing 47 municipalities attended. These sessions were aimed at assisting municipalities to improve their understanding of project finance principles used by IPPs in the development of renewable energy generation.

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Y4.04.01.08.RSA*	SALGA Support municipalities with approaches and activities for entering into long-term Power Purchase Agreements (PPAs) with IPPs	Clarence Oelofse, Sibulele Dlova	06/01/2021-12/30/2021	SAEP Initiative and SALGA Request	N/A	• Quarterly Reports; Model PPAs; Legal opinion on MFMA restrictions	**Moved to Year 5:** Given the number of other activities with SALGA, this activity has not started and will follow the project finance training
Y4.04.01.10.RSA*	CoCT risk and commercial review of draft final PPA	Clarence Oelofse	05/31/2021-08/20/2021	CoCT Request	N/A	• Final PPA	**Moved to Year 5:** Activity is moved to Year 5 due to counterpart's internal processes which have resulted in a delay in the finalization of the LOC
Y4.04.01.11.RSA*	CoCT financial modelling input to 10MW Atlantis Solar Feasibility Study	Clarence Oelofse	05/31/2021-08/20/2021	CoCT Request	N/A	• Reviewed Financial model	**Moved to Year 5:** Activity is moved to Year 5 due to counterpart's internal processes which have resulted in a delay in the finalization of the LOC
Y4.04.01.12.RSA*	CoCT tariff design for the IPP program	Clarence Oelofse	05/31/2021-08/20/2021	CoCT Request	N/A	• Tariff Circulation and structure	**Moved to Year 5:** Activity is moved to Year 5 due to counterpart's internal processes which have resulted in a delay in the finalization of the LOC
Intervention 4.03							
NAMIBIA							
Y4.04.03.01.NAM	Follow-up support to CENORED with battery storage	David Jarrett	10/1/2020 - 2/28/2022	CENORED Request	OC1	• Quarterly report of support provided to CENORED covering • Assistance with making decisions based on report recommendations • Identifying credible partners (financiers, manufacturers, integrators etc.) • Developing and issuing an RFP • Ad-hoc memos to CENORED to aid the transaction	**In progress, continuing in Year 5:** By the end of the financial year CENORED had sent their draft procurement documents for a solar PV plus battery energy storage system to SAEP for review. The system will be embedded in one of the two network areas previously recommended by SAEP. The utility will run a two-part procurement process with the first round meant for prequalifying bidders. CENORED will issue the procurement documents to the market in quarter one of Year 5.

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
MALAWI							
Y4.04.03.02.MWI*	Monitoring and Evaluation, and supplementary support for ESCOM vRE integration	Tshegofatso Neeuwfan	04/01/2021 - 9/30/2021	ESCOM Request	OC2 and OC3	• Quarterly reports • Ad-hoc memos sent to ESCOM	**Completed:** Pending JCM commissioning feedback
SOUTH AFRICA							
Y4.04.03.03.RSA*	SALGA assist municipalities to assess the viability of deploying battery storage and other new technologies in their systems	Tshegofatso Neeuwfan Sibulele Dlova	06/01/2021-12/30/2021	SAEP Initiative and SALGA Request	N/A	• A report on the viability of integrating new technologies into municipal grids; • Techno-economic assessment of the most viable option	**Moved to Year 5:** Activity will be executed in Year 5 due to delays caused by scope revisions
MOZAMBIQUE							
Y4.04.03.04.MOZ	Alten Battery Storage Assessment	Tshegofatso Neeuwfan	05/3/2021 - 09/30/2021	Alten Request	Y2.04.03.04.NAM	• Battery storage integration assessment model • Final report and presentation	**In progress, continuing in Year 5:** By the end of Year 4, the draft final model and draft report for the activity had been developed. The deliverables will go through a series of reviews in October 2021 before being handed over to the counterpart. The model and report will help Alten to make decisions about whether to add a battery energy storage system to one of their already developed PV plants
Intervention 4.05							
ESWATINI							
Y4.04.05.01.SWA	EWSC Energy Efficiency Program Support	Jorry Mwenechanya	10/1/2020 - 9/30/2021	EWSC Request & SAEP Initiative	NA	• Report on feasibility of recommended measures • Implementation plan submitted • Quarterly reports of assistance provided to EWSC	**In progress, continuing in Year 5:** The activity will be completed in October 2021. This is after the initial delivery timeline had to be amended due to disruption caused by civil unrest in Eswatini. The consultant, ENGAGE, has facilitated a series of working sessions and meetings aimed at helping EWSC to adopt tools and procedures in line with the requirements for implementing

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							an energy management system. The tools and systems have been collaboratively customized with EWSC and are expected to be adopted on a sustainable basis to track energy savings initiatives
Y4.04.05.02.SWA	Ministry (MNRE) Energy Efficiency Action Plan Support	Maria Mbengashe	10/1/2020 - 2/28/2022	Ministry Request & SAEP Initiative	NA	• Monthly and quarterly reports on assistance provided to the Ministry • Final recommendation and progress report on adoption and implementation • Ad-hoc advisory memos to MNRE	**Completed:** The activity was successfully completed with SAEP's assistance resulting in the acceptance of both the MNRE and the Ministry of Education and Training agreeing that an agency of sustainable energy should be formally established within the University of Eswatini. This agency will be responsible for implementing country's energy efficiency and conservation policy.
NAMIBIA							
Y4.04.05.03.NAM	Incandescent lightbulbs phase out implementation support	David Jarrett	07/06/2021-09/30/2021	SAEP Initiative	OC1	• Quarterly reports of implementation assistance provided	**In progress, continuing in Year 5:** Activity to be completed in quarter one of Year 5. The scope of work was revised to only include a stakeholder consultation session facilitated by SAEP. During this session SAEP will present the areas of concern related to customs data collection protocols that are meant to support policy decision-making on incandescent lightbulbs. The stakeholders at the session, including the MME and the Ministry of Finance, should agree on a way forward for addressing the gaps

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
MADAGASCAR							
Y4.04.05.04.MDG	Assistance to Madagascar industry association (SIM) with Industrial Energy Efficiency Program Phase 1	Henri Randriamanana	10/1/2020 - 06/30/2021	SIM Request	NA	• Monthly reports on assistance provided to SIM • Finalized request for applications • A list of companies selected to participate in the energy efficiency program	**Completed:** SAEP support has led to the selection of two SIM member companies for the industry association's EE program. This followed an RFA process that received a lukewarm response which resulted in the down-scaling of the program from a large 10-company program to a pilot involving one to three company to demonstrate the benefit of investing in EE to SIM member companies
Y4.04.05.05.MDG	Assistance to Madagascar industry association (SIM) with Industrial Energy Efficiency Program Phase 2	Henri Randriamanana	08/02/2021-11/30/2021	SIM Request	NA	• Inception Report; Energy audit reports	**Moved to Year 5:** Activity will be completed in quarter 1 of Year 5. The management of the two companies were out of the country for most of quarter 4 and this delayed the completion of the activity. By the end of the financial year, they had made arrangements for the walk-through audits that would lead to the identification of projects that can be funded by SUNREF
ZAMBIA							
Y4.04.05.06.ZMB	Lusaka Water Supply and Sanitation Industrial Energy Efficiency	Jorry Mwenechanya	02/01/2021-09/30/2021	LWSC Request	Y3.04.05.03.SWA	• Inception report; quarterly reports; close-out report with targets and progress made in achieving targets	**In progress, continuing in Year 5**: SAEP commenced the activity to provide energy efficiency services to the LWSC, the activity helped to build on recommendations of earlier energy audits that were aimed at optimal management of electricity use for water abstraction, treatment and distribution. They also requested assistance with modelling and simulating their water network, and workshops attended by the LWSC and

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							SAEP teams were facilitated by ENGAGE the consultant.
Intervention 4.06							
NAMIBIA							
Y4.04.06.01.NAM	Provide follow-up assistance to the City of Windhoek - implementation of recommendations	David Jarrett	10/1/2020 - 09/30/2021	COW Request & SAEP Initiative	NA	• List of financial institutions and other stakeholders for the city to engage • Structure of a PPP that the City should adopt for peri-urban electrification	**In progress, continuing in Year 5:** At the end of the financial year, the CoW Electricity Department had obtained all approvals to move forward with an alternative approach to electrifying peri-urban settlements in line with SAEP's guidance. The utility was also in discussions with the AfDB about funding for the projects. The City had requested some time to explore the possibility of accessing a debt financing for the projects before making a final decision about a PPP approach. SAEP stands ready to assist when the decision is made
MADAGASCAR							
Y4.04.06.02.MDG	Baobab+ salesforce training and performance management	Henri Randriamanana	03/15/2021 – 08/31/2021	Baobab+ Request	OC5	• Training reports • Performance management plan	**Completed:** Activity has been completed with the delivery of two rounds of sales force effectiveness (SFE) training for sales managers - the first delivered virtually and followed up with an in-person refresher. The second phase of the support entailed the development of material for the Baobab+ training app which was handed over to the company for uploading to the app.
Y4.04.06.03.MDG	Donor platform setup support	Henri Randriamanana	10/1/2020 - 9/30/2021	Ministry Request	NA	• Quarterly reports	**In progress, continuing in Year 5:** Not much progress was made by the Ministry of Energy to advance the establishment of a donor

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							coordination platform. SAEP had reserved capacity to support this establishment. The program participated in Cooperating Partner efforts to keep the matter of the funding and staffing of ADER and the funding of electrification in Madagascar on the agenda. These efforts had not yielded any results by the end of the activity period. SAEP will continue to support donor coordination efforts in Year 5
Y4.04.06.04.MDG*	Madagascar mini-grid catalytic grant program	Mpumelelo Mlilo	10/1/2020 - 9/30/2021	SAEP Initiative	Grants equivalent activity	• Periodic reports from grant awardees • Mini-grid grant funding disbursed to successful recipients	**In progress, continuing in Year 5:** The execution of the grants will continue into Year 5. Autarsys and HIER have experienced challenges that will result in a 2-to-3-month delay in their delivery schedule. These challenges include the inability to predictably receive delivery of equipment due to sea transport delays. SAEP is also exploring different avenues to establish the true status of Henri Fraise's project and to determine if they will be in a position to successfully deliver their mini-grid.
Y4.04.06.05.MDG	Track and support Solarland entry into the SAVA region SHS market	Henri Randriamanana	10/1/2020 - 09/30/2021	AVORTRA and Solarland Request	NA	• Periodic reports on progress made by Solarland in the SAVA region as well as support provided by SAEP	**Stopped due to counterpart issues:** No significant progress with the activity due to counterpart capacity issues. Solarland had downscaled their energy business in response to Covid-19 and have thus not had the financial capacity and personnel to pursue projects in SAVA, in spite of their interest. SAEP will continue to assist Solarland to take advantage of the World Bank sponsored Off-Grid Market Development Fund

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							(OMDF) in Year 5 so that they can fund their SAVA efforts
MALAWI							
Y4.04.06.06.MWI	Operational support for Malawi SHS Kick-Starter grant awardees and other SHS companies	Kira Rosi-Schumacher	10/1/2020 - 9/30/2021	SAEP initiative	Continuation from Y3	• Quarterly reports detailing support provided to SHS companies	**Completed:** Grant is on track and the support package planned for Year 4 has been delivered. One of the Kick-Starter Program grantees, Yellow Solar, has reported achieving their targets for the grant program. SAEP will continue to monitor all the grantees and provide ad-hoc technical assistance as required in Year 5.
Y4.04.06.07.MWI	Post solar PV and storage installation support to Mercy James Centre	Arthur Wengawenga	01/01/2021-10/29/2021	MJC Request & SAEP Initiative	N/A	• Report with a review of MJC's solar PV and battery installation as well as assistance provided by SAEP	**Not Yet Started:** No activity during the activity period due to challenges experienced by the counterpart in raising the required funding for the planned solar PV plant. This in spite of SAEP providing assistance to the entity with approaches to the funding effort. Raising Malawi, the entity overseeing the project, also experienced a change in key personnel which has seemingly resulted in a reprioritization of the activity
MOZAMBIQUE							
Y4.04.06.08.MOZ	Operational support to Mozambique SHS companies	Kira Rosi-Schumacher	10/1/2020 - 9/30/2021	SAEP Initiative	NA	• Quarterly reports detailing support provided to SHS companies	**Completed:** During Year 5, SAEP released an updated version of the RTM tool which off-grid companies use to plan market expansion activities. The program also kept companies updated on developments with the fiscal incentives work and provided ad-hoc market intelligence support

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Y4.04.06.09.MOZ	Support implementation of Mozambique fiscal incentives for solar products to improve affordability	Kira Rosi-Schumacher	10/1/2020 - 9/30/2021	SHS Company Request	NA	• Biweekly and quarterly reports on the support provided • Fiscal incentives implementation roadmap • Macroeconomic model of incentives scenarios	**In progress, continuing in Year 5:** By the end of the financial year SAEP had developed a draft final version of the Econometric Study. The program had also developed an accompanying slide deck for the MIREME technical council. The main purpose of the deck is to explain the regulatory options for implementing fiscal incentives. The next steps include presenting to the technical committee and continuing with broader engagements to gain support for the fiscal incentives policy direction.
Y4.04.06.16.MOZ	Support BGFA to review applications for round 1 of their second call for proposals	Kira Rosi-Schumacher	04/01/2021-06/15/2021	BGFA Request	Y4.04.06.15.ZMB	• Completed evaluations	**Completed:** Activity was initiated and completed during quarter three. Two members of SAEP's core team and another two Deloitte Home Office consultants evaluated applications for the first of two rounds of BGFA's first call for applications for Mozambique. In addition to the evaluations that took up a significant amount of time, the SAEP off-grid advisor also participated in the post-selection discussions as an observer
SOUTH AFRICA							
Y4.04.06.10.RSA*	SALGA Municipality Off-grid Electrification	Tshegofatso Neeuwfan Sibulele Dlova	06/01/2021-12/30/2021	SAEP Initiative and SALGA Request	OC5	• A report identifying the off-grid opportunities for accelerating electrification in remote areas; • A report providing the approach to developing business cases and concept designs for selected projects;	**Moved to Year 5:** Activity is moved to Year 5 due to delays caused by scope revisions

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
						• Test example of business case development and concept design	
ZAMBIA							
Y4.04.06.10.ZMB*	Alternative energy solutions for health facilities in Zambia	Jorry Mwenechanya	10/1/2020 - 08/30/2021	AVENCION Request	Y3.04.06.19.ZMB	• Periodic reports sent to AVENCION with reviews of their designs, O&M plan and financial models	**In progress, continuing in Year 5:** Activity to continue in Year 5 due to delays by the counterpart. These delays, according to the counterpart, were due to the slow pace of funders in allocating them an area of focus for their pilot project. Towards the end of Y4, the SAEP Zambia Country Manager had conducted a site visit to the designated pilot site
Y4.04.06.11.ZMB	Alternative energy solutions for health facilities in Zambia Phase 2	Jorry Mwenechanya	07/01/2021- 09/30/2021	AVENCION Request	Y3.04.06.19.ZMB	• Report with a review of AVENCION's installation at 5 pilot sites as well as assistance provided by SAEP	**Moved to Year 5:** Activity is moved to Year 5 due to delays by the counterpart. These delays, according to the counterpart, were due to the slow pace of funders in allocating them an area of focus for their pilot project. Towards the end of Y4, the SAEP Zambia Country Manager had conducted a site visit to the designated pilot site
Y4.04.06.12.ZMB	Scaling of alternative energy solutions for health facilities in Zambia	Jorry Mwenechanya	07/01/2021- 02/28/2022	AVENCION Request & SAEP Initiative	Y3.04.06.19.ZMB	• Report outlining a high-level plan for scaling AVENCION's operations	**Not Yet Started:** No activity. The preceding activities Y4.04.06.10.ZMB and Y4.04.06.11.ZMB did not achieve their objectives due to counterpart delays
Y4.04.06.13.ZMB	Program management Support to SIAZ and OGTF	Chris Mubemba	10/1/2020 - 9/30/2021	SIAZ Request	NA	• Quarterly reports	**Completed:** SAEP commenced the activity to provide energy efficiency services to the Lusaka Water and Sewerage Company in Zambia. The LWSC had expressed a desire to build on recommendations of earlier energy audits that were aimed at optimal use of electricity for

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							water abstraction, treatment and distribution. - LWSC requested SAEP's assistance in verifying and prioritizing the EE initiatives or projects that were identified through previous energy audits. They also requested assistance with modelling and simulating their water network. Furthermore, a series of workshops were attended by the LWSC and SAEP teams which were facilitated by ENGAGE the consultant.
Y4.04.06.14.ZMB	Zambia operational support to SHS companies and mini-grid developers	Kira Rosi-Schumacher	10/1/2020 - 9/30/2021	SAEP Initiative	NA	• Quarterly progress reports	**Completed:** Ad-hoc technical assistance was provided to mini-grid and SHS companies throughout the year to help them to overcome issues and manage risks. Mini-grid developers who received assistance include those that are receiving grants under the EU IAEREP program who had to manage a number of implementation risks including taxation and requirements for project guarantees. Similar assistance will continue into Year 5, as appropriate
Y4.04.06.15.ZMB	Support the BGFA in reviewing applications submitted by Zambian SHS/mini-grid companies.	Jorry Mwenechanya	2/15/2021 – 05/28/2021	BGFA Request	N/A	• Completed evaluations	**Completed:** SAEP provided support to BGFA with the evaluation of two rounds of applications for the BGFA's first call for applications which covered a number of countries including Zambia. With SAEP's assistance, BGFA was able to select successful bidders who will be implementing mini-grids and stand-alone system projects

OUTCOME 5

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
Intervention 5.01							
REGIONAL							
Y4.05.01.01.REG	LG – Battery Storage Scaling Technologies workshop with Power Africa battery working group	Tshegofatso Neeuwfan, David Jarrett	05/24/2021-09/30/2021	SAEP proposal building on previous SADC battery event	OC4	• Concept note and project event plan • Chapter Guide Listings and Implementation LPG • Workshop/Seminar presentation	**Moved to Year 5**: SOW approved, moved to Year 5 under OC4
Y4.05.01.05.REG	Off-grid energy access (technology and processes) and enabling support engagement with SADC Secretariat	Lana Nwosu	03/30/2021-06/01/2021	Lessons from Year 3 and SADC request	OC4	• Workshop learning materials	**Completed**
Intervention 5.02							
REGIONAL							
Y4.05.02.01.REG	Design an engagement strategy to support SACREEE with the Oceanic member states	Lana Nwosu	10/1/2020 - 04/16/2021	SACREEE Request	OC4	• Policy improvement Report • Energy snapshot stakeholder consultation concept notes • SACREEE program list	**Completed**
Y4.05.02.02.REG	Refresh and review of RERA training curriculum	OC5 Lead	10/30/2020 - 09/30/2021	RERA Request	OC1	• Capacity building report	**In progress, continuing in Year 5:** The SOW was approved by the COP on 13 September. Tasks are in progress, for Task 1: "Engagement and integration with relevant stakeholders to support RERA in regionalizing its capacity building interventions" a call was held with RERA and NARUC on 29 September.
SOUTH AFRICA							
Y4.05.02.04.RSA*	SALGA Capacity Building Revenue Management	Wayne Mikutowicz, Tea Mihic, Sibulele Dlova	04/06/2021-09/23/2021	Capacity Building	N/A	• Reports, training, workshops	**In progress, continuing in Year 5:** The first of four revenue management trainings took place on 22 and 28 September 2021 where 137 from municipalities 26 attended. The training was

Activity No	Activity Title	SAEP Activity Manager(s)	Start–End Date	Reasoning / Buy-in	Linkages / Dependencies	Deliverable(s)	Activity Status
							interactive and afforded municipalities the opportunity to apply their learnings and share their experiences through working on case studies in small breakout groups of 6 – 8 people and then reporting back to the broader group of participants.
Y4.05.02.05.RSA*	SALGA Capacity Building resource management office	Sibulele Dlova	04/06/2021-09/30/2021	South Africa supporting capacity building	N/A	• Reports, Workshops	**In progress, continuing in Year 5:** Preparations for the training have started - invitations were sent to municipalities. The training is scheduled for 01 & 02 December 2021.
Y4.05.02.06.RSA*	Capacity Building Battery Storage - South Africa	Nachi Majoe	04/06/2021-09/30/2021	Capacity Building requirements from Counterpart and enabling work in SA	N/A	• Workshop Facilitated training, Reports	**Moved to Year 5**

PMO AND CROSS CUTTING–SPECIFIC ACTIVITIES

Below are the PMO- and Cross-Cutting- specific activities are from the Year 3 Work Plan. Any activities that are direct replications of the above Outcome-specific activities have been excluded from the below table. This table is to track the status of the activities and to highlight any activity changes, timing changes or other major items related to activities that SAEP would like to highlight for the period.

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
MONITORING AND EVALUATION						
Y4.PMO.MEL.01	Consolidate M&E Reporting database on Wrike, for all indicators	Lubabalo Banzana, Sabatha Madondo	Quarterly	Consolidation of reporting database	• Consolidated internal M&E database, where all SAEP data can be directly retrieved from one source	**Completed:** This is an ongoing activity
Y4.PMO.MEL.02	Draft and submit M&E data updates for Annual Performance Management Reports	Lubabalo Banzana	1 October 2020	Contract requirement	• Performance management progress reports (Submitted within 30 days after the end of FY)	**Completed:** The activity is ongoing. Assisted with the development of the SAEP Year 5 Work Plan, specifically, around the targets that had been set for some indicators and the transaction status section. Also assisted with the M&E portions of the FY21 Annual Report
Y4.PMO.MEL.03	Support SAEP team to design, collect and analyze data through SurveyMonkey as requested	Lubabalo Banzana	Ongoing	Leading practice	• Ad-hoc data requests from SAEP staff	**Completed**: Through SurveyMonkey, the M&E team was able to assist some of the technical teams to develop and analyze the following surveys: 1) SALGA Power Project Financing, Project Finance Principles and Fin8ancial Model Training: Pre-

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
						Training Evaluation Form 2) Project Finance Training Quiz questions (for 4 sessions) 3) Project Finance Training: Post-Training/Workshop Evaluation Form 4) SALGA Capacity Building initiative on Electrification Project Management Office (PMO): Invitation Supporting Questionnaire 5) Revenue Management and Non-Technical Energy Losses Training: Pre-Training Evaluation Form 6) Training Attendance registers: Revenue Management (for 3 sessions)
Y4.PMO.MEL.04	Review Performance Management and Evaluation Plan (PMEP), and update as necessary	Lubabalo Banzana	Quarterly	Contractual requirement	• Updated PMEP	**Completed:** Updated the Performance Management Evaluation Plan (PMEP) and submitted it to USAID for approval. The new version once approved will be version 10.
Y4.PMO.MEL.05	Draft and Submit M&E data updates for	Lubabalo Banzana	Quarterly	Contractual requirement	• Submission of required reports (as part of the	**Completed:** All Quarterly M&E updates were date and

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
	Quarterly Progress Reports				quarterly reporting process) • Transaction table and tracker updates • Performance monitoring and Evaluation table • Participant training report • DIS reporting • TraiNet reporting • Monitoring, evaluation and learning reporting	submitted including for the Annual Report.
Y4.PMO.MEL.06	Conduct regular data quality assessments (DQAs)	Lubabalo Banzana	Quarter	Leading practice	• 1 x DQA report per country assessed	**Completed:** In FY21Q4 SAEP had a DQA conducted on them by USAID/Power Africa on 20 September 2021. This DQA is conducted by USAID/Power Africa on all the implementing mechanisms. This type of DQA is required for USAID Operating Units performance indicator data every three years or within 12 months after a new indicator being adopted. Furthermore, conducted virtual DQA on previously submitted connections data for SHS companies in Malawi and Zambia.
Y4.PMO.MEL.07	Complete quarterly transactions update on Power Africa Transaction Tracker (PATT)	Lubabalo Banzana	Quarterly	Contractual requirement	• Data entry into PATT (within 30 days after the end of each quarter of performance)	**Completed:** Quarterly updates have been made on PATT

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
Y4.PMO.MEL.08	Manage transaction status updates via Wrike	Lubabalo Banzana	Quarterly	Leading practice	• Up-to-date record of status update on SAEP's transactions	**Completed:** Quarterly updates have been made on WRIKE. This is an ongoing activity
Y4.PMO.MEL.09	Conduct project performance analysis focusing on implementation of activities and their impact on indicator performance as a learning exercise	Lubabalo Banzana	Monthly	Leading practice	• Consolidated indicator report	**Completed:** For this quarter the PMO team did not have a Monthly briefing with the SAEP leadership on actual performance against targets.
KNOWLEDGE MANAGEMENT						
Y4.PMO.PPM.01	Archive various SAEP reports that have been submitted to and approved by USAID on the Team Drive	Sabatha Madondo	Ongoing	Contract requirement	• Bi-Weekly reports • Quarterly reports • Work Plan • PMEP • All deliverables	**Completed:** This is an ongoing activity; all approved deliverables have been archived
Y4.PMO.PPM.02	Track and archive deliverables for the Year 4 work plan activities and submit the tracker to USAID on a quarterly basis	Sabatha Madondo	Ongoing	Contract requirement	• An up-to-date Year 4 Master File with links to activity deliverable folders, shared with USAID	**Completed:** Ongoing activity, all tasks completed for the reporting period
Y4.PMO.PPM.03	Track and archive Trip Reports submitted by the team and submit the tracker to USAID on a quarterly basis	Sabatha Madondo	Ongoing	Contract requirement	• An up-to-date trip report tracker with links to various trip reports	**Completed:** Travel restrictions still in place,
Y4.PMO.PPM.04	Submit datasets/documents to the Development Data Library (DDL)	Sabatha Madondo, Albert Ikhile	Ongoing	Contract requirement	• Ongoing submissions of datasets/documents to the DDL	**Completed:** This is an ongoing activity, the following data was uploaded on DDL: Mozambique RTM Tool, ST Load Forecast,

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
						ZESCO Load data ESO-MD and Mozambique Geospatial Consumer Affordability Survey Data
Y4.PMO.PPM.05	Upload SAEP deliverables onto the USAID Development Experience Clearinghouse (DEC)	Sabatha Madondo, Albert Ikhile	Ongoing	Contract requirement	• Ongoing submissions of deliverables to the DEC	**Completed:** Quarter 1 and Quarter 2 deliverables were uploaded on the DEC, Quarter 3 and Quarter 4 deliverable will be uploaded upon approval of SAEP Quarterly Progress Reports by USAID.
Y4.PMO.PPM.06	Provide ongoing Wrike training and support to SAEP team (as required)	Sabatha Madondo	Ongoing	Leading practice	• Continuous onboarding of SAEP staff to Wrike for program management	**Completed:** This is an ongoing activity, 4 new SAEP team members and 2 Home office staff were trained on WRIKE usage
Y4.PMO.PPM.07	Generate quarterly activity status from Wrike	Sabatha Madondo	Quarterly	Leading practice	• Year 4 Activity Table for Quarterly Reports	**Completed:** ongoing activity, all tasks completed
Y4.PMO.PPM.08	Follow-up with technical teams on activity updates and document uploads on Wrike	Sabatha Madondo	Ongoing	Quality control of management systems	• Up-to-date Y4 work plan activities on Wrike	**Completed:** ongoing activity, all tasks completed
Y4.PMO.PPM.09	Manage project performance updates and feedback to the outcome leads and management	Sabatha Madondo	Quarterly	Leading practice	• SAEP project performance dashboard for internal monitoring of activities	**Completed:** PMO provided performance feedback and presented activity dashboard to SAEP management
Y4.PMO.PPM.10	Updating of SAEP contact list - ongoing	Sabatha Madondo	Ongoing	Leading practice	• Up-to-date contact list CSV	**Completed**: SAEP contact list has been updated by F&O

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
COMMUNICATION AND OUTREACH						
Y4.PMO.COM.01	Branding and Marking Plan updates as required	Helga Wenhold	Ongoing	Leading practice	• Revisions to Branding and Marketing Plan as necessary. There was just an update in Year 3, so no updates envisioned in Year 4, but it has been included	**Completed:** No updates were required
Y4.PMO.COM.02	Communications Strategy updates as required	Helga Wenhold	Ongoing	Leading practice	• Revisions to the Communications Strategy as necessary	**Completed:** No updates were required
Y4.PMO.COM.03	Draft and Submit Biweekly Reports	Albert Ikhile; Helga Wenhold	Biweekly	Contract requirement	• Biweekly report (every two weeks)	**Completed:** All tasks were completed
Y4.PMO.COM.04	Draft and Submit Quarterly Progress Reports	Albert Ikhile; Helga Wenhold	Quarterly	Contract requirement	• Quarterly Progress Reports (within 30 days after the end of each quarter of performance)	**Completed:** Submitted the FY21Q3 report to USAID on 30 July 2021 and awaiting final approval from USAID
Y4.PMO.COM.05	Draft and Submit Year 4 Annual Report	Albert Ikhile; Helga Wenhold	10/30/2020	Contract requirement	• Annual Report (packaged as success stories)	**Completed:** FY21 Annual Report submitted on 30 October 2021 to USAID
Y4.PMO.COM.06	Draft success stories	Helga Wenhold	Ongoing	Leading practice	• Publish at least 2 success stories per quarter	**Completed:** Drafted two success stories
Y4.PMO.COM.07	Utilize/convert success stories for publication on online platforms	Helga Wenhold	Ongoing	Leading practice	• SAEP successes to be published on external communication platforms like Power Africa's Medium, newsletters, USAID website etc.	**Completed:** Drafted an article titled "Providing Relief for Eswatini Electricity Customers and Transparency for Energy", which went live on Power Africa's online publishing platform, Medium on 20 August 2021

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
Y4.PMO.COM.08	Update fact sheets for all SAEP focus countries	Helga Wenhold	Ongoing	Leading practice	• Update the SAEP profile fact sheet, the Transactions fact sheet as well as the following country fact sheets: Malawi, Namibia, Regional, Zambia	**Completed:** Updated all fact sheets in Q4 and will share them with Power Africa in Q1 of YR5
Y4.PMO.COM.09	Publish press releases through PA and USAID channels	Helga Wenhold	Ongoing	Leading practice	• Published press releases based on high-level activities and events	**Completed:** No update
Y4.PMO.COM.10	Maintain SAEP LinkedIn page	Tru-handé Kotze	Ongoing	Leading practice	• LinkedIn continuously updated with relevant and interesting content	**Completed:** Updated the SAEP LinkedIn page on a regular basis by creating content for new posts, reposting or amplifying news as well as SAEP vacancies. This in turn has resulted in the following achievements: • The LinkedIn page reached 4,451 followers by 30 September 2021 • Content is frequently liked, celebrated and reshared by followers
Y4.PMO.COM.11	Regular output of social media content for USAID and Power Africa platforms	Helga Wenhold	Ongoing	Leading practice	• Social media write-ups for Facebook, Twitter and Instagram	**Completed**: Developed social media posts that were published through Power Africa's channels on the following topics: • EDF Renewables connecting its 34.5 MW Wesley-Ciskei Wind Power Station to South Africa's power grid, bringing electricity

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
						to approximately 14,000 households. • Energy consumers in Eswatini will save roughly $44 million over the next 2 years • Namibia's New Era newspaper article announcing that the City of Windhoek has electrified 3,200 households over the past three years and that a municipal council meeting held on 12 August 2021 reviewed and approved the city's five-year electrification plan • SHS Kick-Starter Program for Malawi reaching 85,000 connections
Y4.PMO.COM.12	Creation of visual/digital Public Relations material	Helga Wenhold	10/01/2019–09/30/2020	Leading practice	• Develop one three-minute success story video • Quarterly SHS Kick-Starter for Malawi newsletter • Quarterly newsletters on the progress of the Madagascar mini-grid grant • Expand SAEP photo database to include professional, high-quality, impactful photos	**Completed**: Developed the following items: • SHS Kick-Starter Program for Malawi Quarterly Newsletter • SFE training package • Utility Performance Management Learning Guide (LG) • Power Procurement LG • SAEP IPP Financial Model • Mozambique photo assignment

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
						• SAEP presentation and reporting templates • EWT Handbook
Y4.PMO.COM.13	Plan and implement high-level events in Year 4 as per the outcome planned activities	Helga Wenhold	Ongoing as needed	Leading practice	• High-level events implemented in SAEP focus countries that lead to USAID visibility • Preparation of materials including scene setters, PR material like banners etc.	**Completed:** Southern Africa Local Government Association (SALGA) Letter of Collaboration (LOC) signing event - Updated the scene setter for the event and submitted it to USAID for review on 10 August 2021. The event has been postponed to a date yet to be determined
Y4.PMO.COM.14	Provide copy editing and brand review to project staff	Helga Wenhold	Ongoing as needed	Leading practice	• Quality, client-ready materials and documents	**Completed:** All Q4 tasks were completed
ENVIROMENTAL COMPLIANCE AND CLIMATE CHANGE						
Y4.PMO.ENV.01	Quarterly Review of the Environmental Compliance	Taryn Bigwood	Quarterly	Contractual requirement	• EMMP quarterly update as required	**Completed:** Contributed to all SOW that needed environmental contribution
Y4.PMO.ENV.02	TA on project development documents as required by transactions	Taryn Bigwood	As required	Contractual requirement	• ERFs developed from reviewing each project and transaction • Review of EIAs and EMMP and advise according to international standard, environmental compliance (with the county's legislation) and practical perspective • Review of environmental licenses,	**Completed**: 53 ERFs have been completed

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
					environmental authorizations and other project documents as required	
Y4.PMO.ENV.03	Impact on Wildlife from Energy	Taryn Bigwood	10/01/2020 – 9/30/2021	Leading practice	• Reports on the wildlife interaction status of five utilities (two in Angola, two in Malawi and Mozambique)	**Completed**
Y4.PMO.ENV.04	Assistance with environmental reviews and project assistance	Taryn Bigwood	As required	Contractual requirement	• Review of policies and drafted recommendation on environmental matters • Recommendations to all assessments • Recommendations on all environmental planning needed for the energy regulators	**Completed:** Activity complete for Year 4, and will extend to Year 5
Y4.PMO.ENV.05	Assistance with environmental requirements on grants in Madagascar (mini grid grant program); review of grant applications for environmental considerations and assist in developing an environmental evaluating system for grant applicants	Taryn Bigwood	As needed	Contractual requirement	• Environmental criteria for grant TOR • Grant evaluation forms • Environmental mitigation and mitigation program template • Grant's applicants training on environmental and social knowledge gaps • Grant project environmental compliance reviews	**Completed**: All actions stipulated in the deliverables were actioned and completed in Quarter 1 and 2 of year 4
Y4.PMO.ENV.06	Assistance with environmental requirements on grants in Malawi (SHS Kickstarter) assist in developing an environmental evaluating system for grant applicants	Taryn Bigwood	As needed	Leading practice	• Grant project environmental compliance reviews and audits	**Completed**

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
Y4.PMO.ENV.07	Advisory and Assistance to RNT	Taryn Bigwood	10/1/2020 – 9/30/2021	Technical Support	• Technical comments provided on environmental documents and evaluations, which are detailed as follows: • 17 reports and studies to be undertaking by the owner's engineer, gender specialist and social specialist • Procurement process reports for the Owner's Engineer, the EPC contractor, the monitoring and supervision consultant, the RAP implementation consultant, the gender mitigation specialist and the social benefits specialist • Environmental and Social Management System Plan • Project manual • AfDB environmental and social quarterly report • RNT's first environmental and social audit	**Completed:** This activity will continue into Year 5
Y4.PMO.ENV.08	Advisory and Assistance to ENDE	Taryn Bigwood	10/1/2020 – 9/30/2021	Technical Support	• ENDE reviewed documents • Recommendations to ENDE on best practice standards for AfDB and World Bank projects	**Moved to Year 5**
Y4.PMO.ENV.09	Assistance and advise on renewable energy feasibility activate, which includes the siting of infrastructure	Taryn Bigwood	10/1/2020 – 03/30/2021	Technical Support	• Reviewed documents • Draft recommendations	**Completed**

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
Y4.PMO.ENV.10	Assist with recruitment of project development contractors and consultants to ensure that environmental and social are considered in their appointments	Taryn Bigwood	10/1/2020 – 9/30/2021	Technical Support	• Draft recommendations	**Not Yet Started**
GENDER						
Y4.PMO.GEN.01	Utility gender mainstreaming toolkit	Gender Team	10/01/2020-12/31/2020	For long term sustainability EGENCO request	• Packaged as a toolkit: • Gender self-assessment guidelines (completed in Year 3 for EGENCO) • Gender mainstreaming in utilities and regulators training manual • Training reports	**On hold:** This is on hold until travel to Malawi for this activity can continue
Y4.PMO.GEN.02	Support women entrepreneurs in procurement tender process	Gender Team	10/01/2020-09/30/2021	Leading Practice	• Develop guidelines on how to incorporate gender into the procurement processes • Train procurement/operations team at EGENCO on guidelines • Gender specific analysis undertaken with procurement/operation departments to determine number of women owned businesses that benefit from procurement value chains in utilities currently and then after new guidelines are implemented	**Ongoing**
Y4.PMO.GEN.03	Support SADC Secretariat to implement findings of the SADC Gender Baseline Survey in	Gender Team	10/1/2020 – 9/31/2021	SADC request	• Training on rollout of gender specific indicators to SADC Energy Institutions with a focus on SACREEE,	**Completed:** The activity is completed but the Action Plan is yet to be finalized with SADC

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
	Southern Africa Energy regional institutions				RERA, SAPP and SADC overall • Advisory support to SADC Energy Thematic Group and SADC Energy Ministers on Gender Specific Indicator collection	
Y4.PMO.GEN.04	SHS Zambia Gender Mainstreaming	Gender Team	10/1/2020 – 9/31/2021	Request from SHS companies	• Gender specific training for sales agents and managers as part of SFE • Recommendations for gender hiring practices within SHS companies • Initial impact report on gender focus within SHS companies (similar to PAOP report)	**Ongoing**
Y4.PMO.GEN.05	SHS Kick-Starter Malawi Gender Mainstreaming	Gender Team	10/1/2020 – 9/31/2021	Request from SHS companies	• Gender specific training for sales agents and managers as part of SFE • Implementation of gender hiring practices within SHS companies • Gender specific policies and operational strategies	**Ongoing**
Y4.PMO.GEN.06	Madagascar Mini-grid Gender Mainstreaming	Gender Team	10/1/2020 – 9/31/2021	Leading Practice	• Discussions with grantees on their incorporation of gender mainstreaming into their mini-grids (this will be remotely delivered as the grants kick-off) • Share PowerPoints and training materials on leading practices to incorporate gender and social inclusion into their mini-grid operations	**Ongoing**
Y4.PMO.GEN.07	Gender mainstreaming for Utility Boards	Gender Team	10/01/2020-09/30/2021	EGENCO Board Request	• Utility board gender mainstreaming leadership development program	**On hold** until travel can commence again to Malawi

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
					manual/guidelines (general document that could be shared with all utility boards) • Presentation for the training to EGENCO • Training impact report • Quarterly progress reports of the impact of the training	
Y4.PMO.GEN.08	Gender Analysis for Solar Home System in Malawi, Zambia and Mozambique	Gender Team	10/1/2020 – 9/31/2021	Leading Practice	• Conduct text survey to gather data to study the potential impact of SHS purchase on gender outcomes in Malawi, Zambia and Mozambique • Report summarizing the findings	**Completed.** This analysis is done and just needs to be shared out / disseminated
Y4.PMO.GEN.09	EGENCO Gender Mainstreaming Program	Gender Team	10/01/2020-09/30/2021	EGENCO request	• Gender and social inclusion training manual • Gender and social inclusion training reports for four to five stations • Quarterly progress reports on implementation status	**On hold** until travel can commence again to Malawi
ADMINISTRATION AND OPERATIONS						
Y4.F&O.CLF.01	Continuous monitoring of Malawi SHS Kickstarter program	Mpumelelo Mlilo	10/01/2020-09/30/2021	Contractual Requirement	• Continuous monitoring of Malawi SHS Kickstarter program through the following tasks.	**Completed**
Y4.F&O.CLF.02	Implementation and continuous monitoring of the Madagascar mini-grid grant	Mpumelelo Mlilo	10/01/2020-0 9/30/2021	Contractual Requirement	• Implementation and continuous monitoring of the Madagascar mini-grid grant through the following tasks.	**Completed**
Y4.F&O.FIN.01	Imprest Submission	Zandile Dunge	10/01/2020-09/30/2021	Cash Disbursement Report and Cash	• Cash Disbursement Report • Imprest Reconciliation	**Completed**

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
				Replenishment for Operations	• Electronic Supporting Documents retention. • Imprest Audit Findings	
Y4.F&O.FIN.02	Processing transactions on Pastel Accounting System	Funanani Makhado	10/01/2020- 09/30/2021	Ensure that accurate and complete accounting records are kept	• Monthly Audit file • Payroll to General Ledger Reconciliation • Trial Balance and Balance sheet used preparation of Annual Financial Statements.	**Completed**
Y4.F&O.FIN.03	Processing of Payments	Zandile Dunge & Funanani Makhado	10/01/2020- 09/30/2021	Ensure that all payments are processed	• Disbursement Forms • Payments to Vendors, ICAs, Staff reimbursements from both local and FCA Account. • Funding Zambia Office Operations. • Payroll Payments	**Completed**
Y4.F&O.FIN.04	Contracts Administration	Mpumelelo Mlilo	10/01/2020- 09/30/2021	Ensure that all Procurement, Sub Agreements, Time and Materials (PSM)Contracts adhere to agreed terms and conditions during the life of a contract and monitored Realtime.	• ICA Trackers • Rental Trackers • Sub Agreements Trackers' • Vendors Trackers for PSM	**Completed**
Y4.F&O.FIN.05	Client invoicing	Rajiv Weeraratne	10/01/2020- 09/30/2021	Contractual Requirement	• Client invoice reviewed and submitted each period to USAID (thirteen periods in a twelve-month cycle in accordance with Deloitte yearly financial cycle)	**Completed**
Y4.F&O.FIN.06	Accruals Report submission	Rajiv Weeraratne	10/01/2020- 09/30/2021	Contractual Requirement	• Accruals submitted 30 days prior to the end of the quarter to USAID	**Completed**
Y4.F&O.FIN.07	Quarterly Financial Report submission	Rajiv Weeraratne	10/01/2020- 09/30/2021	Contractual Requirement	• Quarterly Financial Report submitted 30 days after the end of the quarter to USAID	**Completed**

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
Y4.F&O.HUR.01	Payroll processing	Surita Wentzel	10/01/2020- 09/30/2021	Required by South African regulation	• Calculate all statutory withholdings and fringe benefits and process monthly staff payroll.	**Completed**
Y4.F&O.HUR.02	Onboard new resources and submit required approvals to USAID	Surita Wentzel	10/01/2020- 09/30/2021	Based on project requirements	• Resource hiring conducted in line with project policies and procedures.	**Completed**
Y4.F&O.HUR.03	Annual staff compliance trainings or verification	Surita Wentzel	10/01/2020- 09/30/2021	Required based on Deloitte policy	• Confirmation from staff of annual compliance updates	**Completed**
Y4.F&O.HUR.04	Annual staff performance management evaluation	Surita Wentzel	10/01/2020- 09/30/2021	Required based on Deloitte policy	• Conduct staff performance evaluations and document all performance evaluations in personnel files.	**Completed**
Y4.F&O.HUR.05	dd-hoc activities	Surita Wentzel	10/01/2020- 09/30/2021	As required internally	• Biweekly inputs	**Completed**
Y4.F&O.OPS.01	Coordinate office administration and operations support - Pretoria office	Moleboheng Sediyadiya	10/01/2020- 09/30/2021	Required to maintain office operations	• Program administration and operations support for the Pretoria Office.	**Completed**
Y4.F&O.OPS.02	Coordinate office administration and operations support - Lusaka office	Pricilla Miti	10/01/2020- 09/30/2021	Required to maintain office operations	• Program administration and operations support for the Lusaka Office	**Completed**
Y4.F&O.PRO.01	Procurement support for personnel and office materials	Mpumelelo Mlilo	10/01/2020- 09/30/2021	Based on project requirements	• All required materials and services procured in line with project procurement guidelines.	**Completed**
Y4.F&O.STA.01	Meeting statutory requirements (SARS)	Mpumelelo Mlilo	10/01/2020- 09/30/2021	Required submission to SARS based on annual tax calendar	• Submit PAYE, VAT, IRP6, EMP501, IRP5 Certificates and IT34C to SARS	**Completed**
Y4.F&O.STA.02	Meeting statutory requirements (CIPC)	Mpumelelo Mlilo	10/01/2020- 09/30/2021	Required submission of annual returns 30 days after the date of incorporation (October of each year)	• Submission of annual returns or any changes to registration details through Disclosure forms	**Completed**

Activity No	Activity Title	SAEP Activity Lead(s)	Start and End Dates	Reasoning / Buy-In	Deliverable(s)	Status
Y4.F&O.STA.03	Meeting statutory requirements (SARB)	Mpumelelo Mlilo Rajiv Weeraratne	10/01/2020- 09/30/2021	Required by South African regulation in accordance with the exchange control act to enable cross border payments	• Obtain exchange control approval • Obtain exemption from Regulation 3 (1) (c) of the Exchange Control Act	**Completed**
Y4.F&O.STA.04	Meeting statutory requirements (DOL)	Surita Wentzel Mpumelelo Mlilo	10/01/2020- 09/30/2021	Required by the Department of Labor to disclose annual payroll turnover, so that an assessment can be made on the amount payable towards workman's compensation	• Obtain a letter of good standing	**Completed**
Y4.F&O.STA.05	Conduct annual external audit	Rajiv Weeraratne Mpumelelo Mlilo	10/01/2020- 09/30/2021	Required by South African regulation in accordance with the Companies Act	• Management Report and Audited Financial Statements • Submit ITR14 SARS and submit annual return CIPC	**Completed**
Y4.F&O.TRA.01	Develop Travel Authorization Requests and submit for approval	Naresh Totaram	10/01/2020- 09/30/2021	Contractual Requirement	• TARs developed in line monthly travel schedule and submitted to USAID for approval.	**Completed**
Y4.F&O.TRA.02	Coordinate project regional travel	Naresh Totaram	10/01/2020- 09/30/2021	Based on project requirements	• Coordinate with project travel agent, hotels, vehicle rental companies to secure bookings and coordinate regional travel after TARs are approved.	**Completed**

APPENDIX K SAEP YEAR 4 QUARTERLY TARGETS

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
1 / PA1	**(#AA) Capacity (MW) from Transactions Supported by SAEP that Achieved Financial Closure (4.8.2-33 and PA)**	**552.35**	**0**	**30**	**5**	**578.62**	**5,321.38**	**4,000**	**Target: 578.62 MW and 7 transactions** The Year 5 target is based directly on the difference between the generation life of project target of 3,000 MW and actual generation capacity reached FC at the end of Year 4 (2,421,.38 MW). SAEP has a list of seven transactions from the pipeline that are expected to reach FC in Year 5 and push SAEP to reach the target. All the expected transactions to reach FC in Year 5 are for generation. **SAEP supported transactions with high likelihood to reach FC in Year 5, please note that the below transactions add up to be above the target:** **Quarter 1:** • Temane Transmission Project – Generation component 450 MW. Est. FC date: 12/2021 - (US$M 250) • BPC Solar PV 100 MW. Est. FC date: 12/2021 – (US$M 150)
PA6	**Number of Transactions Reached Financial Closure (PA)**	**3**	**0**	**2**	**1**	**6**	**34**	**37**	
17 / PA13	**Amount of public and private investment leveraged (billions USD) for Energy (MIL 4.4.1-32) (4.8.2-10) (PA)[20]**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

[20] Previously, SAEP reported all funds that were mobilized under this indicator. At a meeting with the Power Africa Coordinators Office M&E team, SAEP was informed that, going forward, everything that was previously reported under this indicator must be reported under the "Amount Mobilized: Amount of investment mobilized for energy projects" indicator. This indicator, PA13, has been left on to show that SAEP was previously reporting on it.

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
PA14	**Amount Mobilized: Amount of investment mobilized for energy projects[21]**	**862,500,000**	**0**	**35,200,000**	**4,500,000**	**902,200,000**	**6,126.500,000**	**7,232,600,000**	• ANKA (previously EOSOL Madagascar) – Phase 2 2.35 MW. Est FC date: 12/2021 – (US$M 12.5) **Quarter 3:** • Neo1 – OnePower 20 MW. Est. FC date: 06/2022 – (US$M 25.2) • CENORED 10 MW. Est. FC date: 6/2022 – (US$M 10) **Quarter 4:** • Oshakati Premier Electric (OPE) 5 MW. Est. FC date: 9/2022 – (US$M 4.5)
PA16	**Utilization of Risk Mitigation Tools (PA)**	**3**	**0**	**2**	**1**	**6**	**33**	**37**	
2 / PA2	**Generation and Transmission capacity (MW) pending financial closure (PA)**	**NA**	**NA**	**NA**	**NA**	**NA**	**11,726**	**4,100**	**Target: NA (LOP Target is 4,100 MW)** This uses the new methodology of net transactions that have been added to the SAEP pipeline.
	Generation MW pending financial close	**NA**	**NA**	**NA**	**NA**	NA	6,404.62	NA	
	Generation MW reached financial close	**NA**	**NA**	**NA**	**NA**	NA	2,421.38	3,000	
	Generation Total	**NA**	**NA**	**NA**	**NA**	**NA**	**8,826**	**NA**	
	Transmission MW reached financial close	**NA**	**NA**	**NA**	**NA**	NA	2,900	NA	
	Transmission MW pending financial close	**NA**	**NA**	**NA**	**NA**	NA	0	1,000	

[21] The information reported under this indicator was previously reported under the "Amount of public and private investment leveraged (billions USD) for Energy (MIL 4.4.1-32) (4.8.2-10) (PA)" indicator

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
	Transmission Total	**NA**	**NA**	**NA**	**NA**	**NA**	**2,900**	**NA**	
PA5	**Number of Transactions Pending Financial Closure (PA)**	**NA**	**NA**	**NA**	**NA**	**NA**	**24**	**57**	
3 / PA3	**Generation Capacity (MW) Commissioned (PA)**	**376.33**	**0**	**0**	**1,000**	**1,376.33**	**1,310**	**2,265.38**	**New Target: 1,376.33 MW from 6 transactions.** The following transactions are expected to be commissioned in FY 2022: **Quarter 1:** • Greefspan PV Power Plant No.2 Solar Park 55 MW. Est. COD - 11/2021 • Golomoti Solar PV 20 MW. Est. COD – 12/2021 • Nkhotakota Solar 26 MW. Est. COD – 12/2021 • Soetwater Wind Farm 139.4 MW. Est. COD – 12/2021 • Garob Wind Farm 135.93 MW. Est. COD – 12/2021 **Quarter 4:** • Malawi-Mozambique Interconnector 1,000 MW. Est. COD - 7/2022
PA4	**Number of Transactions Commissioned (PA)**	**5**	**0**	**0**	**1**	**6**	**19**	**27**	
5 / PA11	**(#AB) Direct Electricity Access (PA)**	**168,459**	**175,142**	**227,302**	**224,190**	**795,093**	**1,339,528**	**3,000,000**	**Target: 795,093** SAEP has ongoing activities with ENDE, EDM, off-grid companies in Zambia, Malawi and Mozambique and mini-grids in Madagascar which will assist in achieving the life of project targets. We do not however believe we will hit this life
	Off Grid	75,459	82,142	79,302	76,190	313,093	585,707	N/A	

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
	On Grid	93,000	93,000	148,000	148,000	482,000	753,821	N/A	of project target until June 2023 as has been noted in our request for a No Cost Extension.
4 / PA10	**Number of New Grid and Off-Grid Projected Direct Connections (PA)**	**1,388,879**	**1,213,737**	**986,435**	**762,245**	**762,245**	**NA**	**NA**	**Target: 762,245** This is the number of connections that will remain in the pipeline for us to achieve at the end of Year 5. This is not a cumulative target and is a snapshot in time at the amount left in the pipeline. It is going down overtime because we are working to bring in connections. *(The breakdown between off-grid and on-grid is based on the Year 5 projected connections from the teams off-grid and on-grid activities.)*
	Off Grid	443,379	361,237	281,935	205,745	205,745	N/A	N/A	
	On Grid	945,500	852,500	704,500	556,500	556,500	N/A	N/A	
6 / PA12	**Electricity Loss Reduction [Aggregate Losses (PA)]**	0	0	0	2%	2%	**0**	**0**	**Target: 2%** The target for this indicator is yet to be determined by OC2 and will only be done if determined that we will take on the EDM loss reduction activity and will be baselined as part of the scoping exercise or first task.
7 / PA13	**Energy Efficiency or Energy Conservation (MVA) (4.8.2-31)**	225	225	225	225	900	**28,358.74**	**1,224**	**FY 2022 PMEP Target: 900** ***This indicator is calculated in Gigajoules (GJ).*** Activity with EWSC has exceeded the initial target.
8 / PA15	**(#Y) Number of Laws, Policies, Strategies, Plans, or Regulations Officially Proposed,**	**0**	**0**	**0**	**1**	**1**	**33**	**31**	**FY 2022 PMEP Target: 1** Even though SAEP has already achieved its life of project target with this indicator, SAEP is targeting 1 Laws, Policies, Strategies, Plans, or Regulations that will be officially Proposed, Adopted, or Implemented in FY 2022.

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
	Adopted, or Implemented (4.8.2-28) (PA)								• Develop regional white paper discussing ways to structure fees for new grid connections – **Y5.01.01.06. REG**
9	**Number of Reports, Analysis, Reviews, Action Plans, Tools Developed and Campaigns and Trips Implemented (Custom)**	**7**	**7**	**7**	**7**	**28**	**202**	**205**	**FY 2022 PMEP Target: 28** SAEP is targeting 28 Reports, Analysis, Reviews, Action Plans, Tools Developed and Campaigns and Trips Implemented in FY 2022
10	**(#X) Percentage of RFP Section F Deliverables Submitted in a Timely Manner (Custom)**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**FY 2022 PMEP Target: 100%** The following are the deliverables that should be submitted in a timely manner in FY 2022: • Bi-Weekly • Quarterly Report • Annual Report • Quarterly Financial Report • Success Stories • Participant Training Report • Quarterly updates to the PATT
11	**Number of Institutions with Improved Capacity (4.8.2-14)[22]**	**0**	**0**	**0**	**0**	**13**	**58**	**61**	**FY 2022 PMEP Target: 13**
12	**Number of Women in Energy Sector**	**0**	**1**	**2**	**0**	**3**	**9**	**12**	**FY 2022 PMEP Target: 3**

[22] This is an annual indicator and reporting on it will be done once a year, in the Annual report.

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
	Leadership Roles (Custom)								
13a	**Number of People Receiving Training in Global Clean Energy (4.8.2-6)**	**61**	**62**	**62**	**62**	**247**	**1,066**	**1,313**	**Target: 247** (60% males and 40% females)
	Men	**37**	**37**	**37**	**37**	**148**	**865**	**788**	
	Women	**24**	**25**	**25**	**25**	**99**	**201**	**525**	
13b	**Person-Hours of Training (4.8.2-29; MIL 4.4.1-34)**	**516**	**516**	**516**	**516.5**	**2,064.5**	**8,685.5**	**10,750**	**Target: 2,064.5** This indicator is linked to indicator 13a above.
	Men	**309**	**309**	**310**	**310**	**1,238**	**7,130.5**	**6,450**	
	Women	**207**	**207**	**206**	**206.5**	**826.5**	**1,832.5**	**4,300**	
PA3	**Clean Energy Generation Capacity Installed or Rehabilitated (MWs) (4.8.2-32) & Generation Capacity Commissioned (PA)**	**376.33**	**0**	**0**	**1,000**	**1,376.33**	**675.6**	**2,265.38**	**Target: 1,376.33 MW** The following transactions are expected to be commissioned in FY 2022: **Quarter 1:** • Greefspan PV Power Plant No.2 Solar Park 55 MW. Est. COD - 11/2021 • Golomoti Solar PV 20 MW. Est. COD – 12/2021 • Nkhotakota Solar 26 MW. Est. COD – 12/2021 • Soetwater Wind Farm 139.4 MW. Est. COD – 12/2021

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
									• Garob Wind Farm 135.93 MW. Est. COD – 12/2021 **Quarter 4:** • Malawi-Mozambique Interconnector 1,000 MW. Est. COD - 7/2022
PA7	**National Energy Mix Showing % of MWs from Clean Energy Technologies in Each Country (PA)**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**FY 2022 PMEP Target: 0** Indicator will be tracked. Consistent with PA reporting and sources based on 2016 baseline numbers (or the latest reported).
PA8	**Kilometers of Power Lines Reached Financial Close (PA)**	**0**	**0**	**0**	**0**	**0**	**1,121**	**1,166**	**FY 2022 PMEP Target: 0** There are no transmission transactions were expected to reach FC in FY22.While this metric fell short of the life of project target, there are no transmission transactions that will reach FC in Year 5.
PA9	**Kilometers of Power Lines Constructed or Rehabilitated (PA)**	**0**	**0**	**0**	**218**	**218**	**0**	**0**	**FY 2022 PMEP Target: 0** **Quarter 4:** • Malawi-Mozambique Interconnector 218 KM. Est. COD - 7/2022

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
PA14	**Greenhouse Gas (GHG) Emissions Reduced, Sequestered, and/or avoided (4.8-7) (PA) (thousand tCO2e)** [23]	**1,001,526.3**	**0**	**0**	**4,415,184.6**	4,416,186,149.3	**3,030,918.6**	**6,329,950.7**	**Target: 1,531,348.5** Results to be calculated using CLEER tool at the time of commissioning. This calculation will be reported by the ICF CLEER Tool team, but we have run estimates here. The following transactions are expected to be commissioned in FY 2022 - **Quarter 1:** • Greefspan PV Power Plant No.2 Solar Park 55 MW. Est. COD - 11/2021 – **(114,741 tCO2e)** • Golomoti Solar PV 20 MW. Est. COD – 12/2021 – **(41,724 tCO2e)** • Nkhotakota Solar 26 MW. Est. COD – 12/2021 – **(40,998.1 tCO2e)** • Soetwater Wind Farm 139.4 MW. Est. COD – 12/2021 – **(407,142.8 tCO2e)** • Garob Wind Farm 135.93 MW. Est. COD – 12/2021 - **(396,920.4 tCO2e)** **Quarter 4:** • Malawi-Mozambique Interconnector 1,000 MW. Est. COD - 7/2022 – **(4,415,184.6 tCO2e)**
PA17	**US Exports Supplied for Clean and Cleaner Energy Projects (PA)**	0	0	0	0	0	**0**	**0**	**FY 2022 PMEP Target: No set targets** This indicator has no set target for FY 2022 but the indicators will be tracked and actuals reported.
PA19	**Partner Commitment Tracking (PA)**	0	0	0	0	0	**0**	**0**	**FY 2022 PMEP Target: No set targets** This indicator has no set target for FY 2022 but the indicators will be tracked and actuals reported.

[23] The results for this indicator will be provided by the ICF team that developed the CLEER Tool.

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
3	**Number of competitive procurement processes for new generation capacity implemented with USG Power Africa assistance**	0	0	0	0	0	**2**	**2**	**FY 2022 PMEP Target: 0** SAEP has no plans to support competitive procurement programs during this year. .
4	**Number of host-government power sector strategic planning documents adopted, implemented, or revised, with U.S. Government (USG) Power Africa support**	0	0	0	0	0	**0**	**0**	**FY 2022 PMEP Target: 0** SAEP has no plans to be supporting host-governments on power sector strategic plans in Year 5.
6	**New electricity capacity committed for regional trade through bilateral agreements**	0	0	0	0	0	**0**	**0**	**FY 2022 PMEP Target: No set targets** This indicator has no set target for FY 2022 but the indicators will be tracked and actuals reported if there happens to be regional trade that occurs through a bilateral agreement. We might have something come in related to the Namibia-Angola interconnector support. The maximum capacity of the line is 700 MW.
7	**Number of U.S. companies that participate in Power Africa outreach events**	0	0	0	0	0	**1**	**1**	**FY 2022 PMEP Target: No set targets** This indicator has no set target for FY 2022 but the indicators will be tracked and actuals reported.

SAEP YEAR 5 QUARTERLY TARGETS									
#	Indicator	Q1 FY22	Q2 FY22	Q3 FY22	Q4 FY22	Year 5 Target	Cumulative Results through End of Year 4	Life of Project Target	Notes
8	**Number of U.S. companies participating in Power Africa Projects/Transactions**	0	0	0	0	0	**3**	**2**	**FY 2022 PMEP Target: No set targets** This indicator has no set target for FY 2022 but the indicators will be tracked and actuals reported.

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