









8TH MINI GRID ACTION LEARNING EVENT

LOGISTICS NOTE

Lusaka, Zambia | April 1-3, 2025

CONTEXT

The World Bank's Energy Sector Management Assistance Program (ESMAP) and the Africa Mini Grid Developers Association (AMDA), with support from the Common Market for Eastern and Southern Africa (COMESA), invites you to the 8th Mini Grid Action Learning Event from April 1-3, 2025, in Lusaka, Zambia.

Distributed renewable energy solutions like mini grids play a crucial role in helping achieve the United Nations Sustainable Development Goal (SDG) 7 of universal access to electricity by 2030. Globally, <u>approximately 39 million people will need to be electrified with mini grids between 2024 and 2030</u> to close the energy access gap. This three-day event will bring together stakeholders from across the mini-grid sector, including governments, developers, financiers, partners, and industry associations, focused on accelerating mini-grid deployment.

While mini-grid technology has significantly advanced over the last decade, with around <u>48 million</u> <u>people connected to mini grids as of 2022</u>, several factors still hinder their large-scale deployment. These include a shortage of affordable financing and financing mechanisms, insufficient regulation, and a lack of focus on demand stimulation. The mini-grid event will delve into some of these challenges and will also provide an excellent opportunity to network with leading players in the mini grid sector.

The good news is that the technology is proven and has been demonstrated in thousands of projects worldwide. However, several factors still hinder their large-scale deployment, including a shortage of affordable financing, insufficient regulations and subsidy mechanisms, and a lack of focus on demand stimulation. This event will delve into some of these challenges and will also provide an excellent opportunity to network with leading players in the mini grid sector.

ABOUT ESMAP

The Energy Sector Management Assistance Program (ESMAP) is a partnership between the World Bank and over <u>20 partners</u> to help low- and middle-income countries reduce poverty and boost growth through sustainable energy solutions. ESMAP's analytical and advisory services are fully integrated within the World Bank's country financing and policy dialogue in the energy sector. Through the World Bank Group (WBG), ESMAP works to accelerate the energy transition required to achieve Sustainable Development Goal 7 (SDG7) to ensure access to affordable, reliable, sustainable, and modern energy for all. It helps to shape WBG strategies and programs to achieve the WBG Climate Change Action Plan targets.



TARGET AUDIENCE

This event will bring together key stakeholders in the mini grid sector, including governments, developers, partners and financiers, associations, and many others with the goal to accelerate the deployment of mini grids to achieve universal access to electricity. To achieve the United Nation's goal of universal access to electricity by 2030, we need to mobilize US\$127 billion to deploy more than 217,000 mini grids, serving half a billion people, according to ESMAP estimates.

KEY COMPONENTS

🔆 Scaling Mini Grid Deployment



- 🔆 Universal Energy Access
- 挫 Sustainable Energy Revolution
- Distributed Renewable Energy Solutions

KEY TOPICS

- 💥 Governance and Regulation
- Public Sector-Driven Approaches to Scaling Mini Grids
- 🗱 Innovation in Mini Grids
- 👯 Mesh Grids and Micro Grids
- Harnessing Digital Data for Transformative Mini Grid Business Models

ABOUT AMDA



The African Minigrid Developers Association (AMDA) is an industry association created by private sector minigrid developers and operators, development partners and investors interested in improving political and financial environments for minigrid companies in Africa. AMDA's work involves accelerating minigrid companies' pathway to scale and profitability to end energy poverty by 2030. As of 2025, we have about 56 members in 24 countries across 5 regions in Africa.

AMDA has 4 core pillars: *Member Value* | *Research, Data & Standards* | *Access to Capital* | *Policy, Regulatory & Regional Coordination*.

MINI GRIDS: CONTEXT

ELECTRIFICATION AND THE NEED FOR DECENTRALIZED SOLUTIONS

The current pace of electrification will leave around 660 million people without electricity by 2030, with Sub-Saharan Africa accounting for 83.3 percent of the gap. While SDG 7 remains achievable, a dramatic scale-up is needed. Achieving universal access requires a mix of grid, mini grid, and off-grid renewable solutions. Public funding to stimulate private investment is essential for rapid deployment, ensuring demand is met and SDG 7 is reached.

DECENTRALIZED RENEWABLE ENERGY FOR REMOTE AREAS

Decentralized renewable energy solutions are key to accelerating electrification, especially in remote rural areas where many remain without reliable power. Estimates from ESMAP and GOGLA project that mini grids will provide electricity to 39 million people between 2024 and 2030, playing a vital role in closing the energy access gap. The IEA further predicts that by 2030, mini grids will account for 30% of new connections in Sub-Saharan Africa, while grids will cover 43%. Globally, mini grid deployment has expanded significantly, particularly in Sub-Saharan Africa. Between 2018 and 2024, the share of diesel in mini grid power sources fell from 42% to 29%, while solar PV rose from 14% to 59%, driven by falling costs and technological advancements.

FINANCING AND INVESTMENT IN MINI GRIDS

Despite a sixfold increase in private investment in mini grids since 2015, a significant financing gap remains. Total funding surpassed USD\$2.5 billion in 2023, with ongoing programs totaling over USD\$3.1 billion across 377 initiatives, mainly in Sub-Saharan Africa. However, high subsidies (USD\$411 per connection) and varying program durations highlight the need for further investment.

COST REDUCTIONS AND TECHNOLOGICAL ADVANCEMENTS

The financial viability of mini grids has improved, driven by reduced component costs such as falling prices of solar PV and lithium-ion battery the The levelized cost of Electricity (LCOE) for mini grids decreased by 31%, from USD\$0.55 per kWh in 2018 to USD\$0.38 per kWh in 2021, and capital expenditure (CAPEX) per mini grid connection fell by 43%, from USD\$1,250 in 2020 to USD\$707 in 2024.

Third-generation systems, incorporating solar hybrid generation, smart meters, and remote monitoring, provide reliable, affordable power with uptimes of 90-95%. Software solutions are enhancing efficiency, reducing operations and maintenance (O&M) costs by 15%. However, smaller national developers may face challenges accessing these advanced technologies.

STRENGTHENING REGULATORY FRAMEWORKS AND POLICY SUPPORT

Governments are increasingly prioritizing capacity-building and developing clear policies to attract private sector investment in mini-grids. Donors are providing technical assistance, and countries like Nigeria, Angola, Ethiopia, Kenya, and Zambia have adopted comprehensive regulatory frameworks. However, while these frameworks are in place, implementation remains a challenge. Efforts are underway to simplify regulatory processes, including exemptions for smaller systems and longer licenses to enhance bankability. Additionally, integrated energy planning, which includes grid, mini-grid, and off-grid solutions beyond traditional electrification plans, is gaining momentum.

INNOVATION, FINANCING, AND SCALABILITY

The mini grid sector is evolving from simple electricity provision to fostering broader rural development, with business models expanding to include appliance financing and productive use of electricity (PUE) for income generation. Cost-effective technologies like mesh grids are reducing installation costs by 75%. Innovative financing options, such as blended finance, are lowering investment risks, while one-stop platforms and portfolio bundling streamline project execution. Aggregation platforms are crucial for scaling up, helping developers capitalize on economies of scale and cut costs.

ENABLING FACTORS FOR RAPID MINI GRID EXPANSION

Drawing on a decade of experience, the World Bank has identified 10 key building blocks to scale mini grid deployment.



INFOGRAPHIC | Scaling Mini Grids Requires 10 Building Blocks

Source: <u>Mini Grids for Half a Billion People</u>, Infographic. ESMAP 2022.

REFERENCES

- ESMAP. 2022. Mini Grids for Half a Billion People: Market Outlook and Handbook for Decision Makers. <u>https://www.esmap.org/Mini_Grids_for_Half_a_Billion_People_The_Report.</u>
- IEA, IRENA, UNSD, World Bank, WHO. 2024. Tracking SDG 7: The Energy Progress Report.
- https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2024/Jun/IRENA Tracking SDG7 energy progress 2024.pdf
- SEforALL. 2024. State of the Global Mini grids Market Report 2024. Sustainable Energy for All. <u>https://www.seforall.org/system/files/2024-08/SOTM</u>
- percent20Report percent202024 EN vFc.pdf
- ESMAP, GOGLA, 2024. Off-Grid Solar Market and Trends Report. https://mtr.esmap.org/

DOWNLOAD THE EVENT APP AND START NETWORKING!



AFTER THE EVENT, YOU CAN VISIT THIS PAGE TO BROWSE THE EVENT MATERIALS





EARLY REGISTRATION

We will offer early registration on March 31 from 2-5pm in front of multi purpose rooms 1 and 2.

Please bring your national ID or passport.

TRESS CODE

Formal to casual office business attire. Wear clothes for warm weather.

INTERPRETATION

We will provide English-French and French-English interpretation. Each participant will have access to a headset to listen to the interpretation throughout the event.



CONTACT THE ORGANIZERS



LOCAL TIME (GMT+2)



EVENT VENUE

Mulungushi International Conference Center Plot# 8025, Great East Road, Lusaka, Zambia

Coffee Breaks

Welcome coffee, as well as mid morning and afternoon coffee breaks. Please let us know if you have any dietary restrictions.

Lunch

Buffet lunch will be provided on April 1, 2, and 3 on the ground floor. Follow the signs or request information from one of the organizers.

Receptions

You are invited to a welcome reception on Tuesday April 1 and a closing reception on April 3 in the patio area. Follow the signs.

SAFETY

No matter where in the world you find yourself, it is important to be vigilant of your surroundings. We urge participants to be cautious and observant of their surroundings to stay safe and secure.

LOCAL EMERGENCY NUMBER



991

POLICE AND AMBULANCE

SOCIAL MEDIA

- Make use of the event Photo Call located outside the main ballroom and take photos with your peers and friends.
- Share your social media handles in the app and follow other participants.



ORGANIZERS' SOCIAL MEDIA HANDLES

ESMAP	<u>LinkedIn</u>
AMDA	<u>LinkedIn</u>
COMESA	<u>LinkedIn</u>



https://www.canva.com/design/DAGi3Xvfizg/5tluuojz RZr9m26_bCdCg/edit

EVENT HASHTAGS

#MiniGrids	#EnergyAccess	#M300
#ALEMinigrid2025	#EnergyTransition	#ESMAP
#ScalingMiniGrids	#LivablePlanet	#SDG7
#WomenInEnergy	#Geospatial	#EndPoverty
#RenewableEnergy	#Innovation	#UniversalAccess

PRACTICAL INFORMATION

In Zambia, you'll encounter three main plug types: Type C (two round pins), Type D (three round pins), and Type G (three flat pins), with Type G being the most common.





CURRENCY

The currency in in Zambia is the Zambian Kwacha. For daily exchange rates please visit a trusted source.



WEATHER FORCAST

In April, Lusaka typically experiences the end of the wet season, with temperatures averaging between 18°C/64°F in the morning and 29°C/84°F in the afternoon, and the possibility of showers, though less frequent than in the previous months. Stay updated on the weather <u>here</u>.



IDENTIFICATION

For registration and badge collection, please bring your physical identification. We request that you wear your event badge at all times.

😣 DOWNLOAD OFFLINE MAPS

Apple Store Options: Google Maps (<u>Download</u>) Android Options: Google Maps (<u>Download</u>)



AIPORT-HOTEL-AIRPORT TRANSFERS AND TRANSPORATION TO THE VENUE FROM YOUR HOTEL ARE YOUR RESPONSIBILITY.

EARLY REGISTRATION



March 31



2-5pm



Mulungushi International Conference Center

AGENDA

DAY 1 | TUESDAY, APRIL 1, 2025

LOCATION | MULTI PURPOSE HALLS #2 AND #3 | GROUND FLOOR

9:00 – 9:30am	REGISTRATION AND WELCOME COFFEE
9:30 - 10:00am	 HIGH-LEVEL OPENING REMARKS Moderated by Ms. Fanny Missfeldt-Ringius, Practice Manager, ESMAP, World Bank Mr. Achim Fock, Country Manager, World Bank Mr. Guangzhe Chen, Vice President of Infrastructure, World Bank H.E Ms. Chileshe Kapwepwe, Secretary General of COMESA Hon. Mr. Makozo Chikote, Minister of Energy, Republic of Zambia
10:00 - 10:30am	 LAUNCH: AMDA BENCHMARKING AFRICA'S MINI GRID REPORT Olamide Niyi-Afuye, CEO, AMDA
10:30 - 11:00am	COFFEE BREAK
11:00 - 12:00pm	 PANEL SESSION A STRATEGIC ENABLERS FOR ACHIEVING UNIVERSAL ENERGY ACCESS IN ZAMBIA This session will delve into the challenges and pathways for accelerating access to energy in Zambia. Moderator: Achim Fock, World Bank Panelists: Brian Kelly, Anzana Electric Group Eng. Linus Chanda, REA Zambia Chipokota Mwanawasa, Presidential Delivery Unit, Government of Zambia Ieva Indriunaite, Camco Hadley Habeene, ZESCO
12:00 – 1:00pm	LUNCH FIRST FLOOR
1:00 – 2:00pm	PANEL SESSION BSCALING MINI GRID DEPLOYMENT THROUGH MISSION 300This session will examine the opportunities for mini grids as a decentralized energy solution under Mission 300 while drawing insights from Zambia's experience in implementing its National Energy Compact.Moderator: Fanny Missfeldt-Ringius, ESMAP/World Bank Panelists: Benjamin Curnier, AfDB SEFA Edward Borgstein, GEAPP Irene Calve Saborit, SEforAll Nicole Poindexter, Energicity Corp. Mafayo Ziba, Zambia Ministry of Energy
2:00 – 2:30pm	COFFEE BREAK
2:30 - 3:30pm	PANEL SESSION CTHE FUTURE OF MINI GRIDS: MINI GRIDS AT THE FOREFRONT OF THE SUSTAINABLEENERGY REVOLUTIONThis session will set the stage for defining the next phase of mini grid expansion through scale up of investments, policies, integration of technology, and sector-wide coordination.Moderator: Olamide Niyi-Afuye, CEO, AMDAPanelists: Steven Hunt, FCDO Santos J. Diaz Pastor, African School of Regulation Gabriel Davies, Managing Director at CrossBoundary Barani Aung, Techno-Hill Engineering Myanmar Vijay Modi, Columbia University Jude Numfor, REI Cameroon
3:30 - 4:00pm	CLOSING REMARKS AND OVERVIEW OF DAY 2
4:00 - 5:00pm	 STOP BY the Containerized Mini Grid System by SmartEnergy Limited (outside) STOP BY the 3D Immersive Solar Mini Grid Site Visit by Inensus (inside)
5:00 – 7:00pm	WELCOME RECEPTION LOCATION: PATIO AREA

DAY 2 | WEDNESDAY, APRIL 2, 2025

LOCATION	MULTI PURPOSE HALLS #1, #2 8	& #3 GROUND FLOOR
8:00 – 8:30am	WELCOME COFFEE	
	MULTI PURPOSE HALLS #2 AND #3	MULTI PURPOSE HALL #1
8:30 - 10:00am	 TECHNICAL SESSION 1 Public Sector-Driven Approaches to Scaling Mini Grids This session will explore public-sector-driven strategies and policy frameworks that can accelerate mini-grid deployment across Sub- Saharan Africa. Moderators: Chris Greacen, World Bank and Chiluba Mumba, AMDA Panelists: Chibueze Ekeh, Ceesolar Matthew S. Orosz, OnePower Karl Boyce, ARC Power Suzyo Joe Silavwe, IAREP EU Grant Fund 	TECHNICAL SESSION 2 Aligning Regulatory Frameworks for Mini Grid Expansion This session will explore the various emerging best practices for mini grid regulation addressing issues around licensing, tariffs, technical and quality of service standards as well as approaches for the implementation of regulatory frameworks. Moderator: Stephen Kansuk, UNDP Panelist: GET.transform Ayodeji Ademilua A4&T Power Solutions Humphrey Ngwale, Energy Regulation Board, Zambia Arnaud Ouedrago, ARSE Douglas Cox, Renewvia Samuel Bunnya, AFUR
10:00 – 10:30am	COFFEE BREAK	
10:30 – 12:00pm	 TECHNICAL SESSION 3 <i>Cutting-Edge Innovation in Mini Grids</i> This session will delve into integration of commercially available technological solutions in mini grids leading to decline in costs and efficiency improvement such as through solar PV, energy storage, smart meters, and cookstoves. Moderator: Grace Perkins, Husk Power Systems Panelists: Helidah Wagude, CrossBoundary Innovation Lab Vivian Vendeirinho, KUDURA Power East Africa Ltd. Safiya Aliyu, Sosai Renewables Chanel Gisage, SparkMeter Jon Leary, Gamos East Africa Mathew Alcock, Sustain Solar Elijah Sichone, Zambia Energy Regulation Board 	TECHNICAL SESSION 4 <i>Interconnected Mini Grids</i> This session will examine the role of interconnected mini grids (IMGs) in bridging the gap between the main grid and distributed renewable energy solutions to enhance electricity access, reliability, and affordability. Moderator: Collins Obi, World Bank Panelists: Alberto Rodriguez, RMI Fauzia Okediji, GEAPP Brad Mattson, Husk Power System Jonathan Shaw, Nuru Abba Aliyu, REA Nigeria
12:00 – 1:00pm	LUNCH FIRST FLOOR	
1:00 - 4:00pm	GEAPP CLOSED-DOOR WORKING SESSION ON SUSTAINABLE FINANCING FOR RURAL ELECTRIFICATION UNDER M300 (BY INVITATION)	

DAY 2 | WEDNESDAY, APRIL 2, 2025 (CONTINUED)

	MULTI PURPOSE HALLS #2 AND #3	MULTI PURPOSE HALL #1
1:00 – 2:30pm	 TECHNICAL SESSION 5 <i>Transforming Mini Grid Financing</i> This session will explore issues such as innovative financing models, de-risking products and guarantees, local currency financing and strategies to create a conducive enabling environment for investments. Moderator: Divya Balakrishnan, Get Invest Panelists: Churchill Agutu, UNDP Chinua Azubike, Infracredit Benjamin Curnier, AfDB Stephen Kansuk, UNDP Brad Mattson, Husk Power System Sharmarke Abdulkadir, Tamarso 	 TECHNICAL SESSION 6 The Emergence of Mesh Grids and Micro Grids This session will explore the evolving role of mesh grids and microgrids in delivering energy access, particularly in remote rural areas, and how these technologies are integrated under electrification strategies. Moderator: Sumaya Mahomed, PowerforAll Panelists: Deea Ariana, ESMAP/World Bank Nythia Menon, Okra Solar Daniel Komolafe, First Electric Humphrey Ngwale, Energy Regulation Board, Zambia Felix Boldt, Solaworx Tabi T. Tabi. Granville
2:30 – 3:00pm	COFFEE BREAK	
3:00 – 4:30pm	 TECHNICAL SESSION 7 Productive Uses as a Catalyst for Mini Grid Scale and Sustainability This session will explore a holistic approach to unlocking mini grid-driven economic development by integrating productive use of energy (PUE) to power entire rural value chains such as agriculture, small industries, cold storage, and water pumping among others. Moderator: Murefu Barasa EED Advisory Panelists: Mukabanji Mutanuka, SEforAll Emmanuel Aziebor, CLASP Chifunda Sikazwe, ENGIE Power Corner Oluwatobi Soyombo, Havenhill Synergy Kellie Murungi, Inensus 	TECHNICAL SESSION 8 Harnessing Digital Data for Transformative Mini Grid Business Models This session will explore the transformative role of digitalization in shaping the future of mini grid business models such as integrating data analytics, and remote monitoring. Moderator: Amon Mwadime, AMDA Panelists: Alex Wanume, NOA Uganda Susan Smith, Odyssey Churchill Agutu, UNDP Nathan Williams, Rochester Institute of Technology Dennis Nderitu, GEAPP
	LOCATION MULTI PURPOSE HALLS	S #2 AND #3 GROUND FLOOR
4:30 – 5:00pm	DEMO OF M300+ DRE PLANNING PLATFORM The M300+ DRE Planning Platform covers 58 countries with significant electricity access gaps, including 46 in Sub-Saharan Africa. It leverages satellite imagery, earth observation, on-ground data, and Al-based technology to map every building's access to energy infrastructure. Using a clustering algorithm, the platform analyzes detailed rooftop data to identify nearly 2 million settlements and extracts over 30 indicators, such as population, grid access, economic activity, and estimated energy demand. Additionally, its filtering tool enables users to generate national-level overviews of mini grid potential in these countries. Moderator: Ashish Shrestha, ESMAP/World Bank Panelist: Nabin Raj Gaihre, VIDA	
5:00 - 5:15pm	CLOSING REMARKS AND OVERVIEW OF DA	AY 3

DAY 3 | THURSDAY, APRIL 3, 2025

LOCATION | MULTI PURPOSE HALLS #1, #2 & #3 | GROUND FLOOR 8:00 - 8:30am WELCOME COFFEE **MULTI PURPOSE HALLS #2 AND #3 MULTI PURPOSE HALL #1** COUNTRY SESSION 1 **COUNTRY SESSION 2** 8:30 - 10:00am East and Southern Africa ASCENT Cameroon Program **COFFEE BREAK** 10:00 - 10:30am **COUNTRY SESSION 3 COUNTRY SESSION 4** 10:30 – 12:00pm Democratic Republic of Congo Nigeria 12:00 - 1:00pm LUNCH | FIRST FLOOR COUNTRY SESSION 5 **TECHNICAL SESSION 6** 1:00 - 2:30pm West Africa Regional DARES Program Niger COFFEE BREAK 2:30 - 3:00pm **FIRESIDE CHAT 2 FIRESIDE CHAT 1** The Mini Grid Business Podcast Public Championing Women's Leadership to **Recording: Mergers and Acquisitions as A** Unlock Financing for the Mini Grid Sector Path to Financial Sustainability of Mini Moderator: Fanny Missfeldt-Rungius, ESMAP/World Bank Grids **Panelists:** Monali Ranade, World Bank Moderator: Kellie Murungi, Africa Business at 3:00 - 4:30pm Kate Baragona, World Bank | Madam Rachael **INFNSUS** Inonge Mukamba Zekko, ZESCO – Zambia | Panelists: Cynthia Opakas, Greenmax Capital Ziad Jaber, United Nations Office of Project Group | Prosper Magali, Tanzania Renewable Services (UNOPS) - Yemen | Barani Aung, Energy Association/CEO Power Hut Renewables Techno-hill Engineering, Co. Ltd. Tanzania | Dr. Matt Orosz, OnePower (Lesotho & Benin) Roundtable on Donor Coordination in Mini Grid Sector (By invitation) Organized by SEforALL (MGP), Carbon Trust and the African Forum for Utility Regulators (AFUR), 3:00 - 4:00pm this session will explore the challenges posed in donor coordination of activities, particularly in high-interest national mini-grid markets. AMDA-AfIDA Catapult Accelerator for Mini Grid (By invitation) This session will provide selected developers with an investment-ready mentorship opportunity, 3:00 - 5:00pm culminating in a 20-minute pitch to private investors and financial institutions to secure committed investors who can provide the necessary capital to scale their projects. 4:30 - 5:00pm **COFFEE BREAK CLOSING REMARKS** • Ms. Fanny Missfeldt-Ringius, Practice Manager, ESMAP, World Bank 5:00 - 5:30pm • Eng. Arnold Simwaba, Permanent Secretary-Electricity, Ministry of Energy, Republic of Zambia

5:30 – 7:00pm	CLOSING RECEPTION LOCATION: PATIO AREA
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3D Immersive Solar Mini Grid Site Visit by Inensus



OPEN EVERY DAY | OUTSIDE MULTIPURPOSE ROOMS

About the site visit: Within 3 to 5 min, the VR experience carries the visitor through:

- An electrified farming village in rural Uganda including light at night and shops and stalls operating with electricity after sunset.
- Solar and battery generation.
- Digitization of mini grid operation including software usage, mobile money, and call center operation.
- The benefits of electricity and agriculture sector coupling (Rural Industrialization). Irrigation with pump connected to the solar mini grid, drying of chili grown locally in solar mini grid powered heat pump dryer.
- Edge computing to monetize surplus electricity from solar or hydro generation.

What you will experience: The idea is to provide you with an experience of what mini grid electricity supply means on the ground for those who have not had the opportunity to work in mini grids in rural African villages.



OPEN EVERY DAY | PARKING LOT

SmartEnergy Limited, a trusted leader in power and integration technology systems in Zambia, proudly presents its innovative containerized mini grid system. Designed as a cutting-edge solution for decentralized and renewable energy supply, this system integrates solar power generation, advanced energy storage, and efficient distribution—all housed within a compact shipping container.

With its modular design, this solution ensures rapid deployment, scalability, and reliability, making it the perfect choice for powering remote communities and industrial operations. SmartEnergy Limited continues to drive sustainable development by delivering energy solutions tailored to Zambia's unique needs.









