





INTERNATIONAL ONLINE CONFERENCE

Private investment in electricity transmission in Africa

March 11th, 12th and 13th; 3:00 pm to 5:00 pm, Central Africa Time and 2:00 pm to 4:00 pm Central European Time

Updates on this program can be found at the African School of Regulation website: https://africanschoolregulation.org

The African School of Regulation (ASR), in collaboration with the African Development Bank (AfDB), the Africa Forum of Utility Regulators (AFUR), Africa Minigrid Developers Association (AMDA), the Global Energy Alliance for the People and the Planet (GEAPP), and the International Renewable Energy Agency (IRENA), invites you to a high-level online conference on the necessary regulatory conditions, business model designs, and financial approaches that are necessary to attain a sustainable and scalable development of the minigrid industry.

A very large number of minigrids must be deployed in Africa to achieve the goal of universal electricity access in the continent by 2030, according to estimates by both the minigrid industry and well-known international organizations. Most of the large volume of capital that is needed must come from private investors, and this will only be possible if business models for minigrids can be defined that are financially viable and can maintain this condition permanently, i.e., if the business models are sustainable. In addition, it is necessary that these business models can be scaled up to the necessary dimension, both in terms of the required financing and the technical and managerial capability of the minigrid developers to install all the minigrids identified in the electrification plan.

Despite the favourable projections, minigrids have failed resoundingly in Africa and everywhere else over many years to have significant impact on electricity access. Minigrids cannot attain the relevance they should unless the sustainability of their business model is resolved and implemented through necessary regulatory measures. The conference will focus on the specification of the fundamental regulatory conditions, business model designs, and financial approaches that are necessary to attain sustainability – a necessary, but not sufficient condition for scalability – which will be also discussed.

Conference participants will debate to arrive at the definition of actionable regulatory and business models for minigrids that can attract investors, be deployed quickly, build all the minigrids included in a least cost electrification master plan to achieve SDG, and ensure permanence of reliable and affordable electricity supply. The applicability of lessons learned with minigrids to standalone solar systems will be also examined.

The Conference will bring a limited number of invited experienced participants – from minigrid developers, power pools, ministries, regulatory agencies, development financial institutions, think tanks, private companies, and academia – who will debate under a panel format virtually. The debates will be open free of charge to any interested registered participants, who will be able to send questions and to provide comments that will be conveniently used by the moderators of the panels and made available to all participants.

Preparatory reading material will be made available to all participants ahead of the dates of the Conference. Following the Conference, the ASR team will make public a brief with the summary of the key findings and takeaways, and will organize follow up events – interviews, podcasts, debates on specific aspects – to further examine the topics that had been discussed. This online expert-based debate-style Conference can prepare the ground for the larger presential ESMAP-AMDA 7th Minigrid Action Learning Event (ALE) to be held in Nairobi from February 27 – March 3, 2023.

PROFILE OF SPEAKERS, MODERATORS AND PANELLISTS OPENING



IGNACIO J. PÉREZ-ARRIAGA Interim Director, ASR

MS and PhD in Electrical Engineering from MIT, and Electrical Engineer from Comillas University in Madrid, Spain. Interim Director of the African School of Regulation (ASR) since July 2022. Visiting professor and Senior Lecturer at MIT (2008-2022). Professor at Comillas University; founder and director (1984-1994) of its Institute for Research in Technology (IIT). Professor and Director of Training at the Florence School of Regulation. Life member of the Spanish Royal Academy of Engineering. Fellow and Life Member of IEEE. Commissioner at the Spanish Electricity Regulatory Commission (1995-2000). Independent Member of the Irish Single Electricity Market Committee (2007-2012). Member of the Board of Appeal of the EU Agency for the Coordination of Energy Regulators (2011-2016). Review editor of the 5th Assessment Report of the IPCC. Director of the research team of the Global Commission to End Energy poverty (GCEEP). Consultant and lecturer in more than 40 countries. Currently researching on future trends in power systems regulation, operation, and planning, with a focus on energy access in emerging and developing economies – geospatial optimization methods, business and regulatory models for electrification planning.



ROBERT TAMA LISINGE
Chief of the Energy,
Infrastructure and Services
Section of the Private Sector
Development and Finance
Division of the United Nations
Economic Commission for
Africa, ECA

Robert Tama Lisinge is the Chief of the Energy, Infrastructure and Services Section of the Private Sector Development and Finance Division of the United Nations Economic Commission for Africa (ECA), based in Addis Ababa, Ethiopia. The Division focuses on crowding-in private sector investment in African countries, particularly in the area of infrastructure. Robert is currently the Officer in Charge of the Division. He holds a BSc degree in Civil Engineering and an MSc degree in Transportation Engineering. He also holds an MPhil and a degree of Doctor of Business Administration from the Maastricht School of Management in the Netherlands. Prior to his current position, he was the Chief of the Operational Quality Section of the Strategic Planning and Operational Quality Division of ECA. He has over 20 years of experience in undertaking research and advising African countries and organisations on infrastructure policy as well as transport and trade facilitation issues. He delivers courses on infrastructure development at the African Institute for Economic Development and Planning in Dakar, Senegal. He has also delivered courses in transport planning to Master's degree students at the National Advanced School of Public Works in Yaounde, Cameroon.



FARAI KANONDA Regional Sector Manager – Energy. African Development Bank

Farai Kanonda is the Regional Operations Manager – Energy at the African Development Bank based in Pretoria, South Africa. He has over 18 years' experience in public and private sector development and financing of major infrastructure projects in Africa with a greater focus on power/energy and transport projects. Currently he is responsible for directing and supervising sovereign energy infrastructure operations and ensuring the efficient origination and execution of viable projects as part of the business development process. He is based in the Bank's Southern Africa Business Delivery Unit in Pretoria, South Africa, covering thirteen countries.

PANEL 1: THE CURRENT SITUATION AND EXPERIENCES OF INTEREST IN PRIVATE INVESTMENT IN TRANSMISSION IN AFRICA.



MARC GOLDSTEIN
Co-founder and Director at
Africa Power Ventures Global

Mr. Goldstein is a director of Africa Power Ventures, a leading power economics consultancy in Africa, providing strategic research and analysis to governments, regulators, utilities, project developers and electricity consumers.

Marc has worked across Sub-Saharan Africa on numerous engagements focused on traditional advisory services including cost of service studies; tariff design; policy, legislation and regulation development and price forecasting -for retail tariffs as well as the Day Ahead Market in the Southern African Power Pool (SAPP). APV have also spent many years building models for utilities to support their project development and O&M activities. More recently, Marc's work has been driven by the development of new supply options, especially Renewable Energy plant and storage options. To this end APV also undertake complex generation expansion planning, market modelling and offtake analyses, decarbonisation modelling and clean energy strategies.

Currently APV's focus is set on the driving participation in SAPP by supporting market design, transmission development and price forecasting.



TOWELA NYIRENDA-JERE
Head of Economic Integration
AUDA-NEPAD

Dr. Towela Nyirenda-Jere is head of the Infrastructure, Digitalisation and Energy Division at the African Union Development Agency (AUDA-NEPAD). The Division spearheads flagship programmes and implementation frameworks that advance infrastructure development and regional integration in line with the aspirations of the African Union's Agenda 2063.

Towela is an electrical engineer and development practitioner with more than 20 years' experience working in the private sector, academia and international development. She brings knowledge and experience in programme development, coordination, and implementation of cross-border infrastructure projects and is leading teams that are focused on infrastructure development, energy, digitalisation & cybersecurity. She holds a PhD in Electrical Engineering (Networking and Telecommunications) from the University of Kansas, a Master of Arts in Contemporary Diplomacy (Internet Governance), an ACCA Diploma in Financial Management and is a qualified Project Management Professional (PMP) with the Project Management Institute (USA). Towela is a member of the Malawi Institution of Engineers, the Internet Society (ISOC), the Project Management Institute and the Institute for Electrical and Electronics Engineers (IEEE). She is a Strategic Advisor to the Global Cyber Alliance (GCA), former Trustee of the 5Rights Foundation and a founding member of the Network of African Women in Cybersecurity (NAWC).



MOSHOOD ABOLADE
Investment Director, Project
Development, Africa50

Moshood Abolade is an infrastructure finance professional with project development and finance experience in many African markets and keen interest in sustainable development and unlocking the complexities of infrastructure development in Africa. He is currently an Investment Director in the Project Development team at Africa50 with a focus on early-stage infrastructure investment opportunities in the power sector and particularly for transmission line public private partnerships.

PANEL 1: THE CURRENT SITUATION AND EXPERIENCES OF INTEREST IN PRIVATE INVESTMENT IN TRANSMISSION IN AFRICA.



OUMAR BANGURA
Director of Power Systems
Development, African
Development Bank, AfDB

Principal Legal Expert of the ECOWAS Regional Electricity Regulatory Authority (ERERA), the West African Regional Electricity Market Regulator. He has been mainly involved in the creation and establishment of ERERA since its initial phase as well as in the development and drafting of regional policies and regulations adopted to date for the setting up of the West African Power Pool (WAPP), including the ECOWAS Energy Protocol, the WAPP Articles of Agreement, the constitutive texts of ERERA and the Rules and Procedures of the Regional Electricity Market.

Before joining ECOWAS, Mr. BANGOURA was Legal Advisor to the Minister of Energy of the Republic of Guinea, with practical experience at the national and international levels on energy policy issues, in the negotiation and development of energy projects as well as in the field of intergovernmental cooperation in matters of shared water resources of international rivers.

Previously, Mr. BANGOURA also had a banking career as a senior central bank executive and was a lecturer in corporate tax law at the University of Conakry. As a Business Law Specialist, he has 30 years of combined experience in the banking and energy sectors.



CHRIS FLAVIN
Head of Business
Development at Gridworks
Development Partners.

Chris is the Head of Business Development at Gridworks Development Partners. Gridworks develops and invests in Transmission & Distribution, and off-grid infrastructure in Africa. Gridworks is owned and funded by the UK government through its shareholder, British International Investment. Gridworks is currently developing a portfolio of large scale transmission projects in Africa which will be among the first independent power transmission projects on the continent. Gridworks is also the lead developer of Moyi Power in DRC, and the controlling shareholder of distributed utilities Virunga Power and Sustainable Power Solutions.

Chris has extensive international project development and M&A experience which spans Africa, Asia and Europe. Chris began his career as a private practice lawyer advising a wide range of institutional investors before joining British International Investment in 2014. He was involved in the strategy which led to Gridworks' formation in 2019 and has served on Gridworks' senior management team since it was founded. Chris is responsible for project development and investment activities at Gridworks and sits on the Board of several of Gridworks' portfolio companies. He is a regular contributor to publications and panel discussions on the African Infrastructure sector, and co-authored Understanding Transmission Financing, a publication funded by the US Government's Commercial Law Development Program.

PANEL 2: THE INDEPENDENT TRANSMISSION PROJECT (ITP) APPROACH



SERGIO PORTATADINO Technical Lead Tony Blair Institute

Sergio is the Technical Lead at the Tony Blair Institute, and oversees energy advisors in Sub-Saharan Africa, leading infrastructure projects and sector reforms. During his tenure, he and his team facilitated over \$1.5 billion in investments, initiated more than 60 policy reforms, and advanced West Africa's energy market integration.

Previously, in Guinea, he was instrumental in the sector's development, setting up a regulatory agency, a PPP unit, and finalizing key deals for power projects. His experience spans corporate strategy and M&A, with roles in Eon Global Commodities in Germany and Pöyry Management Consulting.

He holds an MSc in Business Administration from Bocconi University and an MBA from HEC-Paris.



RYAN KETCHUM
Director of Power Systems
Development, African
Development Bank, AfDB

Ryan has 25 years of experience with a focus on energy and infrastructure projects located in emerging and frontier markets. He has advised on projects in over 40 countries worldwide, across Africa, Europe, the Middle East, North America, Southeast Asia and the Indian Subcontinent. Ryan is recognised as a leading lawyer by several legal guides including Chambers Global Africa-wide Projects & Energy (2013 - Present), Africa-wide: Projects – UK (2020, 2024), Legal 500 GC Private Practice Powerlist: Africa Specialists and IFLR1000 in several areas including project finance and development. Ryan is also a frequent speaker and author on topics related to the development and financing of energy and infrastructure projects.



LUIZ BARROSO
CEO of PSR Energy Consulting
and Analytics and former
Director of Brazilian Energy
Planning Agency

Luiz Augusto Barroso is the CEO of PSR. From 2016 to 2018, he was the CEO of the Energy Research Company (EPE), a government company connected to the Ministry of Energy that runs all the energy planning studies in Brazil to support its energy policy decisions. In 2018, he was also a visitor in the International Energy Agency (IEA) in France, working on the IEA's Clean Energy Transitions Program, a multi-year plan backed by 13 countries to support the energy transition worldwide. Before joining EPE, he was a partner and managing director at PSR, where he worked for 17 years, coordinating studies on power-gas systems planning, economics, operation, risk management, and market design in about 30 countries in the Americas, Europe and Asia. Since 2013, he has been an associate researcher at the Institute for Technological Research (IIT) at the University of Comillas in Madrid, Spain. And, since 2010, he teaches annually at the summer school on energy regulation, organized by the Florence School of Regulation (FSR), in Italy. In 2010, he received the Outstanding Young Engineer Award from the Power and Energy Society (PES) of the Institute of Electrical and Electronics Engineers (IEEE). In 2020, he was named an IEEE Fellow for his global technical leadership in analytical methods for energy economics, power systems, and regulation. Luiz holds Bachelor's degree in Mathematics, Master's degree in Applied Mathematics and PhD in Systems Engineering from Coppe/UFRJ, Brazil.

PANEL 2: THE INDEPENDENT TRANSMISSION PROJECT (ITP) APPROACH



TONDERAYI GUMUNYU Energy Expert AUDA-NEPAD

Tonderayi Gumunyu is a registered professional engineer based in Johannesburg, South Africa, with two decades of experience in the power sector, working in both the public and private sectors. His expertise encompasses the development of large transmission projects in Southern Africa from feasibility assessment to implementation. He was a member of the EU-GTAF modelling team seconded to AUDA-NEPAD to develop the Africa Continental Power System Master Plan (CMP), with his focus on generation and transmission capacity expansion planning. He has been actively involved in developing large solar, wind and battery energy storage projects in South Africa.

PANEL 3: REGULATORY MODIFICATIONS TO REMOVE BARRIERS AND FACILITATE **INVESTMENTS**



RITA MADEIRA Director of Power Systems Development, African Development Bank, AfDB

Rita Madeira, Africa Programme Officer, leads and coordinates the International Energy Agency's (IEA) work in West and Southern Africa. IEA's work spans from developing analytical work, such as the flagship Africa Energy Outlook, to advising governments on energy policy and providing capacity building on areas such as statistics, energy modelling and geospatial analysis. Lawyer by training and energy expert by trade, prior to joining the IEA she worked as legal counsel advising African governments in the negotiation of complex commercial transactions, mostly in the power sector, and providing capacity building activities to African stakeholders on project finance and related topics.



DR. PETER TWESIGYE Senior Lecturer and Research Lead Power Market Reforms and Regulation, Power Futures Lab, University of Cape Town

Dr. Twesigye Peter is the Senior Lecturer and Research Lead: Power Market Reforms and Regulation in the Power Futures Lab, at the Graduate School of Business, University of Cape Town, South Africa. He is also a guest Lecturer at the Public Utility Research Centre (PURC) of the University of Florida, USA.

Peter is an Infrastructure Economist with over 14 years' of experience in Electricity Distribution and previously in Urban Water and Sanitation Management. Peter's research and teaching focus on Structural Reforms, Governance and Regulatory Incentives for Improved Utility Performance and Renewable Energy transitions. Peter has the expertise and interest in; Power Market Reforms and Regulation, Tariff Setting & Policy Reviews Energy Transitions, Governance, Energy Policy, Energy Concession Design and Analysis, Managing Utility Performance Improvements, Performance Contract Formulation and Design, Investment Planning and Appraisal, and Strategic Planning.

He is a Member of the International Association for Energy Economics (IAEE), Member of Academy of Regulatory Professionals Advisory Board at the Public Utility Research Centre (PURC)- University of Florida, USA, Member of the National Association of Regulatory Utility Commissioners (NARUC - USA), Member of the Institute of Business Advisors Southern Africa (IBASA), Member of the South African National Energy Association (SANEA), Member of the Economic Society of South Africa (ESSA) and a Member of the Africa-Europe Foundation Strategy Group on Sustainable Energy. Until recently, Peter was the Head of Regulatory Affairs at Umeme Ltd (Uganda's private electricity distribution concession). He has also advised government ministries, undertaken several assignments for donor agencies and worked as a Consultant in designing and implementing turnaround initiatives in over 15 Utilities in West, East, and Southern Africa.



HAROLD R. OBIGA Director Legal Services,

Harold R. Obiga is the Director of Legal Services of the Electricity Regulatory Authority of Uganda. He has over 15 years of expertise in the legal, policy and regulatory fields of power and electricity, renewable energy, telecommunications, finance, and banking. His practice has focused on regulation, government relations, compliance, public-private partnerships, and alternative dispute resolution. He has worked on several projects notably that have gone on to secure project funding of over 2 billion USD and has attracted private capital investment of over 450 million USD. Harold engages with governments, public agencies, and private project developers to devise and implement legal, regulatory, and policy solutions that drive impactful infrastructure projects across East and Southern Africa. He is an alumnus of Syracuse University, Maxwell School of Citizenship – New York - United States, the London Electricity Regulatory Authority School of Economics, Queen Mary University of London, London, UK, and the University of Dar Es Salaam - Dar-es-salaam Tanzania

PANEL 3: REGULATORY MODIFICATIONS TO REMOVE BARRIERS AND FACILITATE INVESTMENTS



RHODA MSHANA LIMBANI Chief Energy Sector Regulations Specialist, African Development Bank, AfDB

Rhoda Limbani Mshana, is the Chief Energy Sector Regulations Specialist at the African Development Bank, providing support and programming to African counties to establish power sector policies, legislation and regulatory frameworks that ensure sustained commercial viability of the sector. She is a Development Economist with over 15 years work experience in both the public and private sectors in the areas of strategy, financial management, operations and project finance across Africa. Responsible for driving the Bank's regulatory support in the energy sector - she leads the development of the AFBD's flagship report the "Electricity Regulatory Index (ERI) for Africa" and implementation of its findings, including leveraging partnerships with relevant stakeholders such as government agencies, development partners and regional and pan-African institutions in the energy sector. She also co-authored the "Financing Power Projects Handbook" (2016) as a tool to inform governments and other stakeholders on key dimensions and considerations, including negotiations and investor engagement. Rhoda has a MSc in Economics (with reference to Africa) from the University of London, UK (2000).

PANEL 4: A CALL TO ACTION. WHAT WORKS, WHAT CAN BE IMPROVED AND THE NEED



ABEL DIDIER TELLA
Director of Power Systems
Development, African
Development Bank, AfDB

Eng. Abel Didier TELLA, of Beninese nationality, is an electrical engineer by training (1983). He holds a Master of Science in electrical engineering, a Specialized Graduate Degree in "Renewable energies, photovoltaic solar option" (1985), a Certificate of Approval of Very High Voltage Line Techniques from EDF (1988), a certificate of mastery of English (1991) and an MBA in management of energy companies (1996).

Eng. Abel Didier TELLA is currently the Director General of APUA,h e has 40 years experience in the Energy Sector. Before this position, he had worked for 25 years at the Société Béninoise d'Energie Electrique, the Benin national power utility from 1983 to 2008.

Internationally, Eng. TELLA was a member of the Scientific Council of the Regional Solar Energy Center (CRES), based in Bamako (Mali) from 1986 to 1989. He speaks, reads, and writes fluently French - English - Spanish - Russian and some Portuguese.



IFEY IKEONUDirector of Power Systems
Development, African
Development Bank, AfDB

Ifey Ikeonu is an Energy Policy, Markets, and Regulation Consultant. She has worked as an advisor on electricity sector reform, access, markets, and regulation across many African countries including Ghana, Eswatini, Gambia, Ethiopia, Rwanda, Zambia, Sierra Leone, Eritrea, Togo and Djibouti. She has also supported various regional power pools and regulators in the development of regulatory and operational instruments, including the West African Power Pool and the East African Power Pool. She holds a Master's degree in Law as well as an MBA in Sustainable Development.

Ifey was the former Chairperson of the ECOWAS Regional Electricity Regulatory Authority (ERERA), Accra, Ghana. Prior to joining ERERA in 2011 as a Regulatory Council Member, she held various management positions at the Nigerian Electricity Regulatory Commission including Head of the Licensing & Enforcement Department as well as Head of the Strategy and Project Management Office. She also worked for as in-house Counsel at the Power Holding Company of Nigeria.

Ifey was pivotal in the development of the regulatory framework for the regional electricity market of the Economic Community of West African States (ECOWAS) and also played an active role in the power sector reform programme in Nigeria where she worked with various committees on the Legal and Regulatory aspects of the reform.



ELVIRA MORELLA
Lead Energy Specialist in the
West Africa Energy Unit of the
World Bank Group

MS and PhD in Electrical Engineering from MIT, and Electrical Engineer from Comillas University in Madrid, Spain. Interim Director of the African School of Regulation (ASR) since July 2022. Visiting professor and Senior Lecturer at MIT (2008-2022). Professor at Comillas University; founder and director (1984-1994) of its Institute for Research in Technology (IIT). Professor and Director of Training at the Florence School of Regulation. Life member of the Spanish Royal Academy of Engineering. Fellow and Life Member of IEEE. Commissioner at the Spanish Electricity Regulatory Commission (1995-2000). Independent Member of the Irish Single Electricity Market Committee (2007-2012). Member of the Board of Appeal of the EU Agency for the Coordination of Energy Regulators (2011-2016). Review editor of the 5th Assessment Report of the IPCC. Director of the research team of the Global Commission to End Energy poverty (GCEEP). Consultant and lecturer in more than 40 countries. Currently researching on future trends in power systems regulation, operation, and planning, with a focus on energy access in emerging and developing economies – geospatial optimization methods, business and regulatory models for electrification planning.

PANEL 4: A CALL TO ACTION. WHAT WORKS, WHAT CAN BE IMPROVED AND THE NEED



WALE SHONIBARE
Director of Power Systems
Development, African
Development Bank, AfDB

MS and PhD in Electrical Engineering from MIT, and Electrical Engineer from Comillas University in Madrid, Spain. Interim Director of the African School of Regulation (ASR) since July 2022. Visiting professor and Senior Lecturer at MIT (2008-2022). Professor at Comillas University; founder and director (1984-1994) of its Institute for Research in Technology (IIT). Professor and Director of Training at the Florence School of Regulation. Life member of the Spanish Royal Academy of Engineering. Fellow and Life Member of IEEE. Commissioner at the Spanish Electricity Regulatory Commission (1995-2000). Independent Member of the Irish Single Electricity Market Committee (2007-2012). Member of the Board of Appeal of the EU Agency for the Coordination of Energy Regulators (2011-2016). Review editor of the 5th Assessment Report of the IPCC. Director of the research team of the Global Commission to End Energy poverty (GCEEP). Consultant and lecturer in more than 40 countries. Currently researching on future trends in power systems regulation, operation, and planning, with a focus on energy access in emerging and developing economies – geospatial optimization methods, business and regulatory models for electrification planning.



TILANA DE MEILLON Senior Operations Officer, Upstream, IFC.

Tilana de Meillon is a Senior Operations Officer, Upstream, IFC, based in Nairobi, Kenya. She is a professional Industrial Engineer and additionally have a Masters Degree in Computer Engineering (Electronic) and Masters Degree in Engineering management. She has 20 years of experience in the energy sector and consulting engineering and a wealth of knowledge and experience in Project Management. Tilana's focus has been on Project Development of power infrastructure projects through her roles at Eskom (the South Africa Power Utility), EON and Aurecon Consulting Engineers and Xaris Energy (a Project Developer) and Transmission and Distribution. She joined the IFC in 2020.

JAMES MANDA

Technical Manager, African Forum for Utility Regulators, (AFUR), James Manda currently works as Technical Manager at the African Forum for Utility Regulators, (AFUR), where he is responsible for planning, coordinating and implementing technical projects.

He possesses a Master's Degree (Msc) in Sustainable Energy Engineering from the Royal Institute of Technology.

He has more than 15 years' experience working in the Energy Sector. He has worked at the Energy Regulation Board (ERB) in Zambia as Technical Director, where he was responsible for ensuring technical and operational compliance for Utilities operating in the energy sector. Prior to that, he worked at the Copperbelt Energy Corporation (CEC PLC) as Projects Manager, responsible for the Planning, development and Commissioning of power projects.