



AFRICAN
SCHOOL OF
REGULATION



INTERNATIONAL ONLINE CONFERENCE

Power pools in Africa: Releasing the potential of regional power trade

Draft Conference Program

May 9th, 10th and 11th, 2023; 2:00pm to 5:00pm¹

Purpose.

Today, power systems around the globe are more interconnected than ever before. This interconnectivity provides opportunities to reduce the cost of electricity, improve system reliability, increase renewable energy penetration, and invest in large generation projects. Power trading in interconnected systems introduces new regulatory challenges in the regulation of power systems. Regulation of these interconnected systems, while keeping anchored in solid principles, must be adapted to the characteristics of each region and the adopted energy policy – from traditionally regulated power sectors to open competitive wholesale markets. In these two extreme cases and all the situations in between, the goal must be the provision of reliable, sustainable and affordable electricity supply to all customers. This requires performant regional institutions, regulatory and business models that can attract the necessary investment and incentivise good performance by all the agents participating in electricity supply and consumption.

In Africa, power systems remain largely underdeveloped, both at end customer level – with just 45% average electrification ratio in all Sub-Saharan Africa – and at wholesale level – with only 13 countries in the continent having power systems larger than 1 GW, while 27 have grid-connected systems smaller than 500 MW, and 14 have systems smaller than 100 MW. The capacity of interconnection between neighbouring countries is very low in general. This situation makes impossible to exploit economies of scale in the deployment of generation plants, and impedes the efficiency and reliability gains derived from coordinating the operation of the power system from a regional perspective.

In order to overcome these challenges, African countries collaborate by establishing power pools for electricity trade between neighbouring countries and to attract investment in generation plants and transmission lines with a regional perspective. Reaping the benefits of a power pool requires careful market design based on sound technical, economic, and institutional analysis of the systems as they exist today and will likely evolve in the future. An even more ambitious initiative contemplates the creation of an African Single Electricity Market (AfSEM). The specific regulatory and business model solutions to the challenges of regional integration in Africa also require an attentive consideration of political economy aspects at country, regional and continental level.

¹ All times are CAT (Central Africa Time) and CEST (Central European Summer Time).

This Conference aims to identify the key improvements that are necessary at institutional and regulatory level to promote power trade, analyse how the best international practices can be adapted to the African context and explore the paths to implementing them. The outcome of the Conference will inspire future efforts in capacity building to disseminate and support the application of the conference findings.

Organisation.

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

Preparatory reading material will be sent 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 Conference will lay the foundations for further activities and contribute to shaping the training content and the research objectives of the African School of Regulation.

The event will be organized by the African School of Regulation ([ASR](#)), in collaboration with the Africa-EU Energy Partnership ([AEEP](#)), the Tony Blair Institute for Global Change ([TBI](#)), [REN21](#), [GET.transform](#), the Institute for Research in Technology at Comillas ([IIT](#)), [RES4Africa](#), the Enel Foundation ([EF](#)), and the Florence School of Regulation ([FSR](#)), with support by the European Commission's Directorate-General for International Partnerships, and with strong presence of the ESMAP-World Bank Group, the African Development Bank and IRENA.

DAY 1. AN APPRAISAL OF THE PRESENT SITUATION.

The first day will be dedicated to discussing the current political economy and regional integration challenges in the ongoing power pools in Africa. After the opening of the conference, there will be two moderated panel discussions. The first one will be devoted to the regional institutions and how the planning of regional infrastructures is made. The second one will focus on the design of transactions and the regulation of transmission in regional organisations.

2:00 to 2:20 pm: Conference opening.

Introductory remarks on the objectives of the Conference by the ASR Interim Director and other speakers from the collaborating organisations.

SESSION 1. Regional organisations and infrastructure planning. Existing approaches and present challenges in regional power trade.

2:20 to 2:40 pm: **Introduction. A review of existing approaches and best practice.**

- Speaker: Mohamed Abbas Eltahir Elabbas (Institute for Research in Technology (IIT), Comillas University).

2:40 to 3:30 pm: **PANEL 1 – Regional organisations and infrastructure planning.**

Assessment of the present situation.

This panel will discuss the different experiences of regional power pools in Africa, their hierarchical institutional model and their relationship with the regional regulations and the regional body. The discussion will cover the legal agreements between countries, the characteristics of the regional bodies, the distribution of roles and responsibilities – specifically including regional transmission planning –, the delegated authority to the regional regulator, and their adequacy to meet the present needs of power trade and investment in regional infrastructures in Africa. The main objective of the session will be to understand the current situation and the underlying justification of the solutions that have been adopted.

Moderator: James Manda (AFUR)

Panelists:

- Ibrahim Soumana (WAPP)
- Mohamedain Seif Elnasr (COMESA/RAERESA)
- Alison Chikova (SAPP)
- Azarak Mogro Atadet (PS, CAPP)

3:30 to 3:45 pm: BREAK

SESSION 2. Market rules and transmission regulation. Existing approaches and present challenges in regional power trade.

3:45 to 4:05 pm: **Introduction. A review of existing approaches in the light of best practices.**

- Speaker: Ignacio Pérez-Arriaga (African School of Regulation)

4:05 to 4:55 pm: **PANEL 2 – Market rules and transmission regulation. Assessment of the present situation.**

This panel will discuss the adequacy of the present market rules to achieve an efficient utilisation of the installed generation capacity from a regional perspective and to contribute

to improved security of supply. It will also examine the impact of transmission regulation on the facilitation of power trade and the investment in cross-border transmission infrastructure. Again, the main purpose of the session will be to understand the logic behind the present regulation of the cross-border energy trade and of transmission investment criteria, remuneration and charges.

Moderator: Samson Ondiek (KPLC)

Panelists:

- Ziria Tibalwa (IRB/EAPP)
- Wilson Masango (SAPP)
- Sié Kam (WAPP)
- Juan Manuel Rodriguez Garcia (Red Eléctrica)

4:55 to 5:00 pm: CLOSING OF DAY 1

DAY 2. PROPOSALS TO IMPROVE POWER TRADE

On the second day, experts on the different topics that have been identified during the previous day will discuss how to make use of the knowledge on the best international practices and on the existing experiences in Africa and elsewhere to propose workable approaches to enhance power trade in the African regional power systems. Therefore, the objective of the sessions of the second day will be the search for proposals in the governance of the institutions and the market rules and transmission regulation that could facilitate a more efficient regional power trade.

2:00 to 2:05 pm: Introduction and schedule of the day.

- Carol Awuor Ofafa (African School of Regulation).

SESSION 3. Regional organisations and infrastructure planning. Best international practice and proposals for improvement.

The following panel will bring successful experiences and approaches to the governance of regional power trade with a view to recommending further developments on the present situation of the power pools in Africa. Particular attention will be paid to the definition of criteria for transmission and generation investment planning, responsibility for the enforcement of the regional plans and the role of the regional institutions. The system of checks and balances between national and regional institutions that must lead to the implementation of a regional plan while respecting each country's sovereignty.

2:05 to 2:50 pm: PANEL 3 – Regional organisations and infrastructure planning. Best international practice and proposals for improvement.

Moderator: Batchi Baldeh (African Development Bank)

Panelists:

- Ifey Ikeonu (Independent Consultant)
- James Wahogo (SG, EAPP) (pending confirmation)
- Leonardo Meeus (Florence School of Regulation)
- Andrea Renzulli (RES4Africa)

2:50 to 3:05 pm: BREAK

SESSION 4. Regional power market design and transmission regulation. Best international practice and proposals for improvement.

The following two panels discuss, first, issues related to physical bilateral contracts, market design and participants, and second, transmission regulations related to transmission cost allocation and transmission business models. Again, successful experiences and practices from Africa and elsewhere will be used as a guide to make recommendations that can improve regional power trade in the African power pools.

3:05 to 3:50: PANEL 4 – Regional power market design. Best international practice and proposals for improvement.

Moderator: Robert Lisinge (UNECA)

Panelists:

- Marcelo Tardio (CESI)
- Charly Gatete (ERERA)
- James Wahogo (SG, EAPP)

- Cathy Oxby (Africa GreenCo)

3:50 to 4:05 pm: BREAK

4:05 to 4:55 pm: **PANEL 5 – Transmission regulation in a regional context.**

Moderator: Wilson Masango (SAPP)

Panelists:

- Federico Pontoni (TBI)
- Jonathan Hedgecock (Ricardo Energy & Environment)
- Mirlan Aldayarov (ESMAP, WB)

4:55 to 5:00 pm: CLOSING OF DAY 2

DAY 3. THE WAY FORWARD

The third day will start by recapping the output from days 1 and 2 and will continue with two round table discussions. Both sessions will focus on measures that are considered to be implementable in the short to medium term. Following the same pattern that has been followed during the previous two days, the first session will address institutional and infrastructure planning matters, and the second one market rules and transmission regulation, although now adding the perspective of harmonisation of regulation at regional and even continental perspective.

2:00 to 2:05 pm: Introduction and schedule of the day

- Daniella Ngarambe (African School of Regulation).

2:05 to 2:25 pm: Wrap up of days 1 and 2. Open issues and key lessons learned.

- Ignacio Pérez-Arriaga (African School of Regulation).

SESSION 5. What works, what can be improved and how?

Based on the previous sessions, summarised in the wrap up, the next two panels will focus on potential measures to strengthen regional power trade from the institutional and regulatory perspectives.

2:25 to 3:20: Panel 6. What works, what can be improved and how on institutional and infrastructure planning matters?

Moderator: Yohannes Hailu (UN Economic Commission for Africa)

Panelists:

- Stephen Dihwa (SAPP)
- Wale Shonibare (AfDB)
- Nicholas David Elms (ESMAP, WB)
- Kamugisha Kazaura (African Union) (to be confirmed)

3:20 to 3:35 pm: BREAK

3:35 to 4:30: Panel 7. What works, what can be improved and how, in terms of market rules and transmission regulation, and what can be done from a harmonisation perspective, at a regional and even continental scale?

Moderator: Elvira Morella (ESMAP, World Bank)

Panelists:

- Simbini Tichakunda (AUDA-NEPAD)
- Asami Miketa (IRENA)
- James Manda (AFUR)
- Gareth Walsh (TBI) (to be confirmed)

4:30 to 4:45 pm: Conference closure