



GRUPE DE LA BANQUE AFRICAINE
DE DEVELOPPEMENT
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Power Utility CEO Governance and Leadership Forum
“The African Power Utility of the future”

REPORT & RESOLUTIONS

African Development Bank Headquarter,
Abidjan, Côte d’Ivoire

March 07- 08, 2019

SUMMARY OF OUTCOMES

1. Objectives and participants:

The Power Utility CEO Governance and Leadership Forum gathered 80 participants, including:

- Chief Executives Officers, Managing Directors, Secretaries General, Representatives of the boards of African Power Utilities members of the Association of Power Utilities of Africa,
- Officials of the Ministries in charge of Energy and Power
- Chairmen and officials of African regulatory bodies
- Directors, Managers and experts from the African Development Bank (AfDB)
- Representative of the French Development Agency (AFD)
- Officials of the African Union commission on Infrastructure and Energy
- Equipment promoters and Academia

The aim of the seminar was to discuss the trends occurring in the energy sector and to share experiences between members and partners around the topic of the “African Power Utility of the future”.

2. Day 1: Thursday, March 7th, 2019:

Opening ceremony:

At the opening ceremony, the welcoming address pronounced by Mr. Abel Didier Tella, Director General of APUA, was followed by the opening remarks of Mr. Amadou HOTT, Vice-President, of the Energy, Power, Green Growth and Climate Change Complex of the African Development Bank (AfDB). Mr. Batchi BALDEH, Director Power Systems Development of the Bank, made the statement on his behalf. Finally, H.E. Mr. Abdourahmane CISSE, Minister of Petroleum, Energy and Development of Renewable Energy delivered the official opening speech.

Session 1: A summary of the themes and conclusions of the Leadership Forum series was presented by the Director General APUA.

Sub-Theme 1: The integration of Renewable Energy in electricity networks

The moderator Mr. Abel Didier TELLA, introduced the topic and mentioned that the deployment of renewable energy systems is now effective on the continent but poses challenges for utilities, Power Pools and developers to carefully assess the readiness of the national and regional power networks to safely absorb massive RE generation.

Speakers presented their experiences in renewable energy integration:

- Mr. Demba SY of **SENELEC** highlighted the situation in Senegal where 90 % of the generation was produced from thermal diesel, gas fired sources, and the country went into deep crisis with power shortages, customer protests that led the country to hire expensive emergency power facilities.

This led to adoption of a Renewable Energy electricity act that launched the implementation of RE program in a context of pressure where the best options could not be explored. However, the country has now scaled-up bidding processes for RE. SENELEC reached 140 MW of solar on a total of 600 MW capacity.

Key issues noted:

- Network stability problems due to limited baseload and reserves.
- Plan to develop storage solution, but yet to be implemented;
- Feed-in-tariffs in order to allow embedded producers already authorised by the latest policy reform, but regulatory measures not yet put in place.
- Limited connection to the regional network (OMVS, OMVG, WAPP);
- Impact of instabilities of national networks on the regional grids impacting other countries in the network.
- Mr. David MUTHIKE of KENGEN presented the power sector structuring in Kenya. He also recalled the situation that the country went through some years ago with power shortages that led to the contracting of up to 300 MW thermal emergency power.

The company embraced a geothermal development program and today the energy mix comprises 75% renewable energy (geothermal, wind, solar, hydro), 25% diesel on a total 2,723 MW installed capacity. Noted good participation of the private sector.

Key issues noted:

- Good baseload with RE is possible using geothermal and hydro
- 15% wind and solar cause not instability problem
- Auction for solar help optimise cost of supply
- Adding RE in the energy mix is positive
- Emerging trend for country to move to open access versus single buyer market, but regulation not yet in place (e.g. Zambia)
- Cross subsidies can accelerate penetration of decentralised RE systems
- Decentralised RE solutions can increase RE in energy mix
- RE Corporation was established by the Government of Kenya

Mr. Djouambi of SONELGAZ presented his utility, a holding of 32 subsidiary companies and 12 co-owned companies. The country has 21,000 MW installed capacity, 30,000 km of transmission line; 300,000 km of distribution lines, 10 million customers with 99% access to electricity

In terms of RE integration, they started with a pilot phase of 320 MW after they planned to add 50 MW yearly, with the option of hybrid conversion of the existing thermal stations.

Key issues noted:

- Use of hybrid isolated thermal system with RE sources.

Following the different presentations, questions and answers session enriched the debate covering a broad range of issues relevant to RE integration in the African context.

In conclusion, good integration of RE in the grid should involve, inter alia:

- Proper planning of systems, nationally and regionally, at utility level and power pool level;
- Issue of the integration of prosumers be addressed by the regulatory measures in most countries;
- Due consideration of mini grids development;
- Considering to move away from single buyer model;
- An affordable overall electricity bill;
- Capacity building needed for RE integration;
- Local private sector participation, with local currency based contracts
- Promoting least cost projects rather than subsidies
- Starting always on small scale and absorb progressively with consideration of the network technical and economic studies
- Considering the benefits of regional power trade before installing expensive national power plants

Sub-Theme 2: Disruptive technologies and their influence on the sector

The moderator Prof. Anton EBERHARD, introduced the topic by stating that disruptive technologies are entering into our daily lives but also disruptive is the way the sector has been changing during the past years when for a long period the sector has been quite conservative.

Prof. Jose Ignacio PREZ-ARRIAGA, MIT and Florence Institute, quoted from the report of the AfDB/APUA's study on Power Sector reform, to develop his point of view regarding disruptive technologies.

He presented the case of Spain, compared African systems with other regions in the world, and came up with concerns on:

- Prices of renewable energy;
- Price of solar energy in the systems;
- Set limit to the penetration of solar based on technical and economics terms (with limit around 20%);
- No response in terms of tariffs to account for the new energy mix;
- The volumetric metering and net metering at different tariffs periods or values, rather than flat average tariff.

He recommended:

- The development of robust regulatory framework to go together with RE deployment.
- Equip systems with more sophisticated metering equipment capable of monitoring hourly changes, rather than average monthly.

Dr. Mohamed Abdel RAHMAN, Chairman ERA, Egypt presented the power sector structuring in Egypt; noted a 50,000 MW installed capacity with a diverse energy mix in the sector. He indicated that Egypt reached lowest tariffs in scaling solar power (less than USD 0.05/kWh), and highlighted the need for a rapid change in the regulatory framework in order to address the impact of disruptive technologies on the sector.

Dr. Lawrence JONES, Vice President EEI, highlighted the need to carefully consider the national and regional environments before adoption of any kind of disruptive technologies, some of them being experimental.

He suggested areas where innovative technologies could be used to improve power system performance and where one should be very prudent because of risks related to data sharing, cyber security, virtual reality, the sustainability of some technologies, etc.

He emphasized that, contrary to popular belief, power and telecommunication sectors were fundamentally different and the integration of new technologies in the power sector requires more careful performance benchmarking.

Sub-Theme 3: New business models: African utility of the future

The moderator Mrs. Angela NALIKKA, Manager, AfDB introduced the topic and gave the floor to the speakers of the panel, composed of:

- Prof. Jose Ignacio PREZ-ARRIAGA, MIT and Florence Institute,
- Mr. Pradeep Pursnani, Shell Foundation,
- Mr. Insingoma David Kahwa; Chief Strategy and business Development officer, UEGCL, UGANDA, and
- Mr. Callixte KAMBANDA, manager, AfDB

In his keynote, Prof. Ignacio

- recalled the development and status of regional markets built around the regional power pools;
- provided examples of regional electricity markets around the globe;
- stated that, in the sequencing, the development of well-designed transmission infrastructure based on sustainable business models with commercial terms should be a priority;
- insisted that transmission charges should not be designed solely based on the underlying bilateral trade transactions, but equable shared by all users of the lines;
- advocated that utilities of the future should embrace new technologies, mini-grid and off-grid business models;
- Recommended that rules of engagement for mini-grid should be transparent and predictable.

Mr. Pradeep, Shell foundation, advocated for more decentralised models, rather than grid extension only.

Mr. Kahwa, on the case of Uganda, highlighted one of the benefits of unbundling resulted in more private sector (IPPs) participation in generation, although it failed to reduce cost and increase access.

Key Issues Noted:

- Focus on the main business of providing sustainable power to households and for lighting and productive uses;
- Several business models and key stakeholders for the utility of the future were presented;
- New constraints due to changes in consumer's profile and needs, rapidly changing technologies, markets and power industries, make the transformation of the business models of utilities inevitable;
- Regional markets to play an important role to accelerate access (cheaper electricity) and promoting more RE in the energy mix, nationally;
- Constraints in transmission lines to be addressed through more role for private sector through project finance or SPV and PPP models;
- Transmission charges should not depend on commercial transaction between buyer and producers only.
- Move toward more integrated distribution business models, partnership with private sector, especially for rural electrification;
- Unbundling is not always the solution (case of Uganda)

3. SYNTHESIS OF THE DAY OF 08TH MARCH

Day 2: Friday, March 8th, 2018

A summary of the 1st day was presented by Abel Didier TELLA of APUA and Jacques MOULOT of the AfDB

Panel Discussion

- The moderator Mr. Henry Paul Batchi BALDEH, introduced the topic. He mentioned that it was necessary for every CEO/Manager of power utilities to take actions towards making his companies more responsive to evolving shareholders' demands, prioritising the needs of his customers and partners in order to remain competitive in the midst of other players of the power sector, in the era of deep transformation of the business environment.
- He therefore invited some CEOs, MDs and their representatives to consider carefully the outcomes of these discussions and draw key lessons from the achievements and challenges discussed to prepare their utilities for the future.
- Speakers presented their views on the power utility of the future and the specific related implications for restructuring the utility.

EEHC (Egyptian Electric Holding Company): The company went through an unbundling process but the derived companies are still under public ownership. There is a noticeable participation of the private sector in generation and distribution, but not yet transmission. He indicated that new facilities in renewable energies and scaling solar projects brought a significant tariff drop in solar.

He also noted that an Energy efficiency program with demand-side management was initiated for better optimization. But, overall, the challenges faced by the sector are to improve asset management; undertake investment planning, maintenance monitoring; build capacity for RE integration; and develop a Database and performance monitoring system.

Société de Gestion de Manantali (SOGEM) involving Senelec, EDM Mali and Somelec : The Chief Executive of SOGEM emphasized the need to accelerate capacity-building programs. He recalled some important considerations, including:

- Seek the resumption of training at ESIE (Bingerville);
- Support to basic vocational education;
- Promote African industries and local content;
- Value expertise and give time to senior staff to transfer their knowledge to younger colleagues;
- Improve communication and set plans to accompany utilities in the transformation process; and
- Promote private sector participation in all segments of the power business value chain

CMEN-SA (Compagnie Minière et Energétique du Niger) : The Managing Director of CEMEN briefly presented his company, created to promote a project of construction of a 900 MW coal fired thermal plant, which first phase should be 400 MW, and a coal briquette factory to reduce the use of fire wood in the region, thus contributing to mitigating CC. He deplored that Niger with its huge resources was still in a critical energy poverty.

He urged APUA to continue lobbying for:

- The promotion of increase of generation to fight against poverty and under-development;
- The promotion of mutualized capacity building program and the basic education; and
- South-south cooperation.

He also urged the AfDB to assist with accessing financing and partners for Niger power sector.

ENERCA (Energie de Centrafrique): The Managing Director of ENERCA emphasized that one of the main challenges of his utility was that his country has a substantially large territory of 680,000km² with a small population of 850,000 people, thus a very low density that makes increasing access to electricity a challenge. In addition, the socio-political situation has worsened the situation.

Therefore, he recognized that in their case, the need to change business model was crucial. Also preparing the future of ENERCA required:

- Implementing a loss reduction program including the deployment of prepaid meters;
- Engaging in a capacity building program to prepare more skilled personnel to replace retiring workers;
- Improving customer services and introducing innovative services; and
- Building interconnection lines with the six neighbouring countries to lower cost and improve energy security.

ZESCO (Zambian electricity supply company Ltd): The Director of Cooperation of ZESCO, representing the Managing Director, presented the power sector in Zambia. He highlighted with some achievements such as a 80% prepaid meters penetration; a 80% generation from green sources; the recent increase of tariffs particularly in mines

and industries; progress in national and regional projects implementation; and the scaling solar program that is expected to achieve very low tariff.

The projections for ZESCO is to:

- Increase the electricity access from 67 % in urban zones to 90%,
- Intensify power trade with neighbours,
- Put in place smart subsidies,
- Prepare the utility for unbundling and recapitalization,
- Continue the promotion of a continental capacity building program,
- Refinance its debt,
- Control employees' costs, and
- Implement, with the support of the AfDB, a cost-of-supply study leading to tariff review, lastly

He challenged the audience with a question: "Who should be paying for rural electrification?"

The moderator gave the floor to the audience and an interactive debate followed the communication of the CEOs.

RESOLUTIONS

After the two day-workshop, and the very enriching exchanges, a series of resolution where suggested:

Resolution 1 : On utility finances:

The Chief Executive Officers, Managing Directors and Officials of African power utilities gathered in Abidjan on March 7th and 8th, 2019, considering the need to durably solve the recurrent problem of solvency of the utilities, urge the decision-makers to address the nexus of issues related to cost reflective tariffs, revenues, subsidies, unbundling and recapitalization in a sustainable manner, through well designed and sequenced sector reforms and investments.

Resolution 2: Disruptive Technologies

The Chief Executive Officers, Managing Directors and Officials of African power utilities gathered in Abidjan on March 7 and 8, 2019, acknowledging the high level of risks introduced by disruptive technologies and emerging new business models, decided to:

- share information and best practices in the design and implementation of smart grid, off-grid and mini-grid projects ;
- adopt advanced smart metering systems where economically and technically feasible;
- promote research and development related to new technologies and RE; and
- adopt risks management and mitigation measures, especially in anchoring RE generation on the grid.

Resolution 3: Mentality shift and cooperation

The Chiefs Executive Officers, Managing Directors and Officials of African power utilities gathered in Abidjan on March 7th to 8th, 2019, considering the highly strategic

role of their companies for the development of their countries, decided to foster new managerial mentality towards accelerating the development of the sector, through more south- south cooperation and regional trade.

Resolution 4: Industrialization

To encourage governments to support the sector by establishing special economic and industrial zones, in order to fast track the industrialization of African countries in order to create jobs, increase electricity demand, and reduce import of costly technologies.

Resolution 5: Transmission lines and green growth

To accelerate completion of more transmission lines facilitating mutually beneficial power trade, within regional power markets, and contributing the transition to green and inclusive growth on the continent.

Resolution 6: Sustainable Utilities transformation

The Chiefs Executive Officers, Managing Directors and Officials of African power utilities, gathered in Abidjan on March 7th to 8th 2019, noting the diverse challenges that utilities of the present face to transition to the utility of the future, acknowledged the AfDB's Sustainable Utility Transformation Agenda, and the outcomes of the AfDB/APUA commissioned Power sector reforms study, as credible tools to make utilities become credit-worthy and perform adequately their mandates.

Done in Abidjan, on 8th March 2019.