-INSTITUT-

AFRICA

THE KEY
ACTORS
OF ENERGY





A word from

Makhtar DIOP Vice-President Africa, World Bank



Energy: Africa, a continent with infinite potential

Africa's growth has been slowing down, due to the price decline of raw materials and uncertain international climate. But could this actually be a good sign? Statu quo is no longer an option as Africa needs to carry out the electricity challenge in order to win recognition in the world's economy. This debate didn't start yesterday and the task at hand is arduous, even if a lot has already been accomplished. Two Africans out of three - more than 600 million people - still don't have access to electricity. Without massive investments in the energy field, Africa won't manage to secure the necessary conditions of a sustainable and inclusive growth.

Africa has a major asset: it's at the dawn of an unprecedented green energy revolution. Resources are abundant - the hydraulic and solar potential is immense-, and countries like Morocco and Senegal are already betting on solar power plants, as the costs are dropping. In Kenya, the wind power industry has wind in the sails and the country aims at granting universal access to electricity to its people by 2020. The private sector is interested in the electricity marker as can be seen through the increase in projects carried by Independent Power Producers (IPP), which attract most of the private investments in the sector at the moment. In rural areas, off-grid renewable energy projects flourish and financial backers invest heavily to help Africa conquer

its most crucial challenge. Institutions such as the World Bank play the role of catalysts by bringing financial guarantees to private investors and working with governments to improving legal frameworks.

To speed up the process, there are three main conditions. Electrifying **Africa** requires that distribution companies are reformed to put an end to their governance and financial shortcomings. Guaranteeing their viability is essential as they are the main buyers of IPP-produced electricity. The distribution sector is the key to success. Then, the electrifying process would be much slower without the intervention of institutional investors such as pension funds and insurers. That task is currently undertaken by the World Bank as they are de-risking investments. The efforts to conduct regional networks of transmission (power pools) must not dwindle, and finally, institutional conditions must make it possible for these markets to work.

This study, dedicated to the actors of energy, is proof that this ever-growing sector attracts more and more forces. Now is the time for our promises to become reality.

A word from

Pascal LOROT President, Choiseul Institute



With our new study focused on the Key Actors of Energy in Africa, the Choiseul illustrates Institute once commitment in identifying the protagonists who animate a formidable growth shared by many different economies on the continent. Whether they're leading large, renowned groups at a continental level, international institutions or disruptive companies that meet local needs, the men and women presented in this panorama are key actors involved in Africa's energy challenges. The continent's future depends on their implication, talent and capacity to rethink practices and models.

If energy is indeed an economically strategic stake allowing industrialisation, automation and access to modern comfort, it is first and foremost a social issue. A reliable power distribution enables children to do their homework at night, rural villages to light up their dark alleys, populations to launch micro-businesses.

Energy is the source of our mobility, modernity, safety, growth and development.

Today, too many African populations and regions are denied the capacity to make plans for the future because they don't have access to affordable and reliable energy. Large projects - however essential

to Africa's highly awaited development struggle to see the light of day. The number of local initiatives is increasing but lacks in coordination. Funding is too scarce and even if investors grow interested in the continent, the amounts engaged remain low in comparison with the rest of the world. The regulations are complex and divergent; a regional – if not continental harmonisation is necessary.

These challenges are the responsibility of the energy field's actors. Considering their respective qualities and their will to nurture a long lasting implication with Africa and the Africans, there is no doubt that they will lead the continent into the light.

Lighting up the darkness. Such is their calling, their destiny.

A word from

Bruno BENSASSON General Manager, Engie Africa



Titre du texte

Etenim si attendere diligenter, existimare vere de omni hac causa volueritis, sic constituetis, iudices, nec descensurum quemquam ad hanc accusationem fuisse, cui, utrum vellet, liceret, nec, cum descendisset, quicquam habiturum spei fuisse, nisi alicuius intolerabili libidine et nimis acerbo odio niteretur. Sed ego Atratino, humanissimo atque optimo adulescenti meo necessario, ignosco, qui habet excusationem vel pietatis vel necessitatis vel aetatis. Si voluit accusare, pietati tribuo, si iussus est, necessitati, si speravit aliquid, pueritiae. Ceteris non modo nihil ignoscendum, sed etiam acriter est resistendum.

lamque lituis cladium concrepantibus internarum non celate ut antea turbidum saeviebat ingenium a veri consideratione detortum et nullo inpositorum conpositorum fidem sollemniter inquirente nec discernente a societate noxiorum insontes velut exturbatum e iudiciis fas omne discessit, et causarum legitima silente defensione carnifex rapinarum sequester et obductio capitum et bonorum ubique multatio versabatur per orientales provincias, quas recensere puto nunc oportunum absque Mesopotamia digesta, cum bella Parthica dicerentur, et Aegypto, quam necessario aliud reieci ad tempus.

Quid? qui se etiam nunc subsidiis patrimonii aut amicorum liberalitate sustentant, hos perire patiemur? An, si qui frui publico non potuit per hostem, hic tegitur ipsa lege censoria; quem is frui non sinit, qui est, etiamsi non appellatur, hostis, huic ferri auxilium non oportet? Retinete igitur in provincia diutius eum, qui de sociis cum hostibus, de civibus cum sociis faciat pactiones, qui hoc etiam se pluris esse quam collegam putet, quod ille vos tristia voltuque deceperit, ipse numquam se minus quam erat, nequam esse simularit. Piso autem alio quodam modo gloriatur se brevi tempore perfecisse, ne Gabinius unus omnium nequissimus existimaretur.

Harum trium sententiarum nulli prorsus assentior. Nec enim illa prima vera est, ut, quem ad modum in se quisque sit, sic in amicum sit animatus. Quam multa enim, quae nostra causa numquam faceremus, facimus causa amicorum! precari ab indigno, supplicare, tum acerbius in aliquem invehi insectarique vehementius, quae in nostris rebus non satis honeste, in amicorum fiunt honestissime; multaeque res sunt in quibus de suis commodis viri boni multa detrahunt detrahique patiuntur, ut iis amici potius quam ipsi fruantur.

TABLE OF CONTENTS

METHODOLOGY	p. 8
AFRICA: KEY ACTORS OF THE ENERGY SECTOR	p. 9
- INDUSTRIAL ACTORS	p. 11
- NEWCOMERS	p. 15
- FINANCIAL ACTORS	p. 19
- INSTITUTIONAL ACTORS	p. 23
- INFLUENCERS	p. 27
STUDY AND ANALYSIS	p. 30
VERBATIM	P. 32
ABOUT	p. 35

METHODOLOGY

"Africa: the key actors of energy" is a panorama dedicated to the African personalities that actively shape the growth of the energy field in Africa. Whether they are leading high performing companies, first rate institutions or developing innovative solutions..., this panorama aims at identifying the most influent actors in the African energy industry at national, regional, continental, even global scales.

Our ambition is not to come up with an exhaustive list of all the actors of the field. They are legion, and many a profile more could have fitted this panorama. However, our goal is to show how diverse the profiles and careers of those who pursue ambitious goals for the growth of African energy.

Thus we were careful to respect the balance between large geographical areas (Northern, Eastern, Western, and Central Africa), the different types of activities (public/private, etc.), the types of energetic resources (wind, solar, hydraulic, thermal...), etc.

The Choiseul Institute worked on the project for months and sought help from experts on the continent in order to publish the most true-to-life panorama of the African economy's dynamic forces. More than 500 profiles were evaluated in the process.

AFRICA: KEY ACTORS OF THE ENERGY SECTOR

This panorama is dedicated to the key actors in African energy and showcases five categories:



INDUSTRIAL ACTORS

Leaders of energetic infrastructures, historic producers and distributors, regional large companies, etc.



NEWCOMERS

Leaders of minigrid exploitation companies, offgrid networks development, alternative distribution, etc.



FINANCIALS ACTORS

Leaders of investment funds and banks specialised in the sector, that finance energy-related projects.



INSTITUTIONAL ACTORS

Representatives of continental institutions, regional federations, and national organisations concerned by the energy-related issues as part of their agenda.



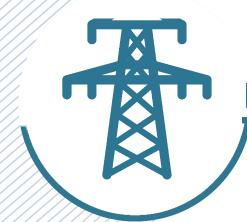
INFLUENCERS

The great African actors leading conglomerates having activity in direct connection with the energy sector as well as the most influent international organisations.

NOTA BENE

Only profils matching certain conditions were selected:

- being a Nationan of one of the 54 African States;
- Having an active contribution to the developpent of the energy sector in Africa.



INDUSTRIAL ACTORS

Network managers, gaz producers, power distributors... the industrial actors are invigorating the energy market on a daily basis. They bring energy to the population and the continent bloodforce and thus take part in the development of Africa.

The main stake that awaits the industrial actors is improving the quality and availability of energy on the entire continent; but also diversifying their energy ressources in order to minimise their exposure to the fluctuations of raw materials rates.

METHODOLOGY REMINDER

The Industrial Actors category gathers leaders of energetic infrastructures, historic producers and distributors, regional large companies, etc.



Azeb ASNAKE

ETHIOPIA (**)



Chief Executive Officer ETHIOPIAN ELECTRIC POWER



የኢትዮጵያ ኤሌክትሪክ ኃይል ETHIOPIAN ELECTRIC POWER

ADDIS ABEBA



Mouhamadou Makhtar CISSÉ

SENEGAL



General Manager **SENELEC**



DAKAR



Johnny Dladla

SOUTH AFRICA



Chief Executive Officer **ESKOM**



JOHANNESBURG



Isabel DOS SANTOS

ANGOLA



Chief Executive Officer SONANGOL



LUANDA



Ahmed EL SEWEDY

EGYPT



Chief Executive Officer ELSEWEDY ELECTRIC



CAIRO



Moncef HARRABI

TUNISIA



Chief Executive Officer **STEG**





Dominique KAKOU

IVORY COAST



General Manager COMPAGNIE IVOIRIENNE D'ÉLECTRICITÉ







Bongani NQWABABA

SOUTH AFRICA



Chief Executive Officer SASOL





Abdelmoumen OULD KADDOUR

ALGERIA



Chief Executive Officer SONATRACH



ORAN



Ken TARUS

KENYA



Chief Executive Officer KENYA POWER





Ayman TAUD

MOROCCO



Chief Executive Officer NAREVA

NAREVA Holding
CASABLANCA



Jubril Adewale TINUBU

NIGERIA



Chief Executive Officer
OANDO PLC



Oando

LAGOS



Offgrid networks developers, solar farms designers, disruptive strategists... newcomers add a new dynamic to the market as they bring in new ideas and processes. Their agility allows them to respond swiftly when they face a problem and deploy flexible solutions to the many situations they encounter on the field.

Their main challenge is to apply they model to the continental scale and fully display their potential and become major actors of the African energy sector.

METHODOLOGY REMINDER

The New Comers category gathers leaders of minigrid exploitation companies, offgrid networks development, alternative distribution, etc.



Sherife ABDELMESSIH

EGYPT



Chief Executive Officer
FUTURE ENERGY CORPORATION





Femi ADEYEMO

NIGERIA



Chief Executive Officer ARNERGY





Anis AOUINI

TUNISIA



Chief Executive Officer SAPHON







Samba BATHILY

MALI



Chief Executive Officer SOLEKTRA







Chahar BOULAKHRAS

ALGERIA



Chief Executive Officer SKTM





Ekolan Alain ETTY

IVORY COAST



Chief Executive Officer
IVOIRE HYDRO ENERGY





Hassanein HIRIDJEE

MADAGASCAR



Chief Executive Officer AXIAN



TANANARIVE



Mugo KIBATI

KENYA



President M-KOPA



NAIROBI



Patrick NGOWI

TANZANIA



Chief Executive Officer HELVETIC SOLAR



ARUSHA



Henry NYAKARUNDI

RWANDA



Chief Executive Officer
AFRICAN RENEWABLE ENERGY
DISTRIBUTOR

ARED KIGALI



Jasandra NYKER

SOUTH AFRICA



Chief Executive Officer BIOTHERM ENERGY





Sean THOMAS

SOUTH AFRICA



Chief Executive Officer BIO2WATT





Investment funds, banking institutions, traditional banks... the financial actors continuously pour money into the energy projects in Africa. They are an unavoidable support of the industrial actors as well as newcomers in the sector. They allow the most ambitious projects to come to life.

Their main challenge is to evaluate the risk level entailed in their investments considering the political unstability that is still prevalent in many regions. It is important to note however, that the small number of projects limits their possibility of diversifying their assets and thus, reducing the risks.

METHODOLOGY REMINDER

The Financial Actors category gathers leaders of investment funds and banks specialised in the sector, that finance energy-related projects and support he sectors' actors in their ambitions and development.



Christian ADOVELANDE

BENIN



President
WEST-AFRICAN DEVELOPMENT BANK





Mimi ALEMAYEHOU

ETHIOPIA



General Manager
BLACKRHINO GROUP

BlackRhinoJOHANNESBURG



Andrew ALLI

NIGERIA



Chief Executive Officer
AFRICA FINANCE CORPORATION



LAGOS



Marilyn AMOBI

NIGERIA



Chief Executive Officer NIGERIAN BULK ELECTRICITY TRADING PLC



ABUJA



Alain EBOBISSÉ

CAMEROON



Chief Executive Officer AFRICA50 AFRICA O
PRINCED AFRICAS INFRASTRUCTURE

CASABLANCA





Hisham EL KHAZINDAR

EGYPT



General Manager
QALAA HOLDINGS





Jason HARLAN

SOUTH AFRICA



Chief Executive Officer FIELDSTONE AFRICA

FIELDSTONE

JOHANNESBURG



Amadou HOTT

SENEGAL



Vice-President Power, Energy, Climate and Green Growth

AFRICAN DEVELOPMENT BANK





Saran KEBET-KOULIBALY

IVORY COAST



Vice-President Portfolio Management INTERNATIONAL FINANCE CORPORATION





Vincent LE GUENNOU

IVORY COAST



Chief Executive Officer
EMERGING CAPITAL PARTNERS

ECP PRIVATE EQUITY ABIDJAN



Heba SALAMA

EGYPT



Director

COMESA REGIONAL INVESTMENT
AGENCY





Tarik SENHAJI

MOROCCO



Chief Executive Officer ITHMAR CAPITAL

ITHM∧R C∧PIT∧L RABAT



International and professional organisations, State agencies... Institutional actors are the heart of the regulation process on the continent for the field of energy. Their role is to ensure that the market rules surrounding competition are respected and to offer services that match the consumers' needs, and finally, to build reliable and tailored networks.

Their main challenge is to promote ambitious infrastructure projects to answer to the energy requirements of all populations and unify standards at a continental level.

METHODOLOGY REMINDER

The Institutional Actors category gathers representatives of continental institutions, regional federations, and national organisations concerned by the energy-related issues as part of their agenda.



Amani ABOU-ZEID

EGYPT



Commissioner

AFRICAN UNION COMMISSION FOR
INFRASTRUCTURE AND ENERGY



Union Africaine

ADDIS-ABEBA



Dayo ADESHINA

NIGERIA



President
NIGERIAN LPG ASSOCIATION





Olusola AKINNIRANYE

NIGERIA



President
WEST AFRICAN POWER POOL



West African
Power Pool

COTONOU



Mustapha BAKKOURY

MOROCCO



Chairman of the board MASEN



RABAT



Lebbi CHANGULLAH

TANZANIA



Secretary-General
THE EASTERN AFRICA POWER POOL



ADDIS-ABEBA



Davin CHOWN

SOUTH AFRICA



President
SOUTH AFRICAN PHOTOVOLTAIC
INDUSTRY ASSOCIATION





Anne ETOKE

NIGERIA



Chief Executive Officer THE AFRICA GAS ASSOCIATION



The Africa Gas Association

LAGOS



Mahaman Laouan GAYA

NIGER



Executive Secretary AFRICAN PETROLEUM PRODUCERS ASSOCIATION

APPA BRAZZAVILLE



Roger HOUKANRIN

BURKINA FASO



Director of the Energy, Telecommunications and NTIC UEMOA

OUAGADOUGOU



Mahama KAPPIAH

GHANA



General Manager **ECOWAS CENTER FOR RENEWABLE ENERGY AND ENERGY EFFICIENCY**



PRAÏA



Jean Chrysostome MEKONDONGO

RCA



Secretary-General CENTER AFRICA'S ENERGETICS POOL

BRAZZAVILLE



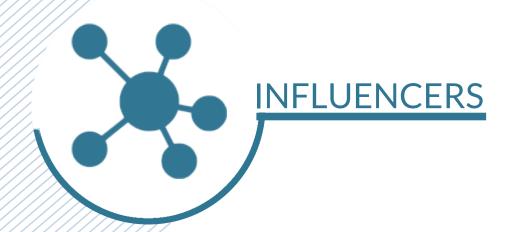
Jose Antonio NETO

ANGOLA



President ASSOCIATION DES SOCIÉTÉS D'ELECTRICITÉ D'AFRIQUE





Experienced businessmen and manufacturers, international institution leaders... influencers can change the whole energy landscape in Africa with a simple decision. Thanks to their financial means and political influence, their capacity for action is tremendous.

Their main challenge is to organise their action as to improve their overall impact on the field. They also must maintain constant contact with the public authorities in charge of energetic questions in their intervention zones.

METHODOLOGY REMINDER

The Influencers category gathers great African actors leading conglomerates having activity in direct connection with the energy sector as well as the most influent international organisations.



Akinwumi ADESINA

NIGERIA



President

AFRICAN DEVELOPMENT BANK





Aziz AKHANNOUCH

MOROCCO



President AKWA GROUP **AKWA**

CASABLANCA



Folorunsho ALAKIJA

NIGERIA



Vice Presidente FAMFA OIL FAMFA IL

LAGOS



Aliko DANGOTE

NIGERIA



President
DANGOTE GROUP

DANGOTE LAGOS



Mohammed DEWJI

TANZANIA



Chief Executive Officer
METL GROUP

GROUP
The People's Brand

DAR-ES-SALAAM



Tony ELUMELU

NIGERIA



President
THE TONY ELUMELU FOUNDATION



THE TONY ELUMELU FOUNDATION LAGOS



Elham IBRAHIM

EGYPT



Vice President WORLD ENERGY COUNCIL WORLD ENERGY COUNCIL

LONDON



Mo IBRAHIM

SUDAN



President MO IBRAHIM FOUNDATION Mo Ibrahim

LONDRES



Mohammad SANUSI BARKINDO

NIGERIA



Secretary-General OPEP



Organization of the Petroleum Exporting Co

VIENNE



Naguib SAWIRIS

EGYPT



Chief Executive Officer ORASCOM TMT



CAIRO



Youba SOKONA

MALI



Vice President in charge of African Initiative for Renewable Energy

GIEC

Gied General discussed GENÈVE



Véra SONGWE

CAMEROON



Executive Secretary ECONOMIC COMMISSION FOR AFRICA



ADDIS-ABEBA

ENERGY IN AFRICA

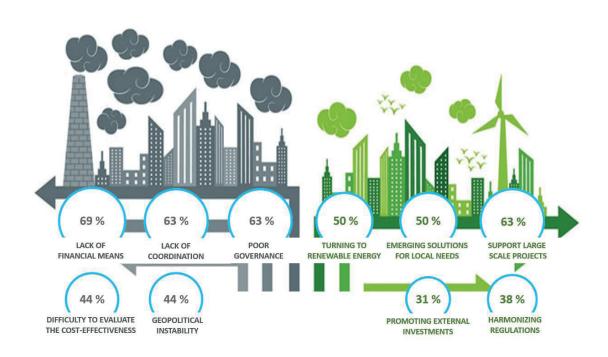
In order to better understand the stakes of energy in Africa, we sent a six-part questionnaire to the actors identified in this study. The results allowed us to draw a detailed portrait of the challenges, obstacles and opportunities encountered by the main actors of the field on a continental scale.

First and foremost, the surveyed people shared their global perception of energy in Africa. A vast majority considered it a pillar of growth and that opportunities were legion, although some added that the field itself was sometimes an obstacle to development, and presented a major challenge for the future.



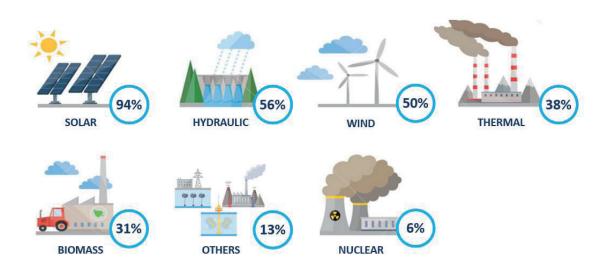
A FIELD AT A CROSSROADS

The surveyed people were then asked to detail what obstacles had played a part in slowing down the field's development, and what challenges they would have to face to realise its full potential in Africa. The lack of means and interstate coordination as well as unsatisfactory leadership were deemed major hindrances. On the contrary, some answers showed that setting up regional, even continental projects would be decisive, as well as the key actors' capacity to come up with solutions adapted to local needs and willingness to consider renewable energy.

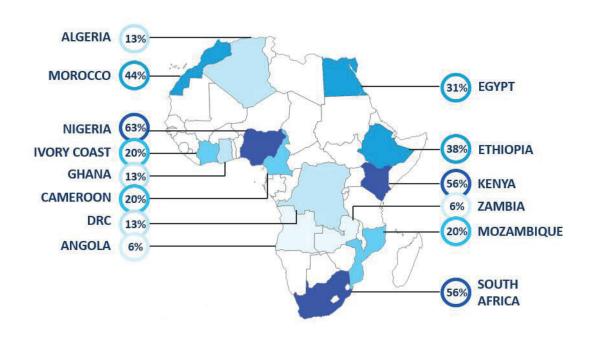


STRONG POTENTIALS INEQUALITIES

Beyond the global problems, the issue of energetic sources was raised. The surveyed people gave us their top 3 most promising energy sources, of which renewable energies were the most cited. At a continental level, the renewable energy resources are endless, thus, solar energy was widely mentioned, followed by hydraulic and wind power. Thermal energy remained present, due to the continent's large resources in hydrocarbons. Biomass energy followed closely while the nuclear energy was falling behind.



The geographical issue is equally of the utmost importance. The surveyed people ranked the five countries they deemed most promising in terms of energy mix. Unsurprisingly, the main economies find themselves at the top of the ranking. Interestingly, no top country produces oil, with the exception of Nigeria. They were incented to diversify their energy sources in order to be less dependent on the fluctuating international oil markets and invest more in alternative solutions and renewable sources of energy. The top countries of this list also sport a political and economic environment favourable to the field.



VERBATIMS

The last part of our questionnaire allowed those who answered it to give us their own sentiment of the main challenges faced by Africa when it comes to energy. Their selected answers is very revealing of the potential and importance of the field for the continent's future.

While in some cases a number of relatively well-established tools are available (e.g., energy systems studies, crop modeling, hydrological and flood analysis, etc.), much more work is necessary to adequately address other types of effects, such as impacts on energy infrastructure and electricity production, human health, local and global environmental change, and the provision of ecosystem services.

Lebi Changullah

We need to encourage off-grid and mini-grid solutions to complete the traditional system and ensure Africa a universal access to energy as well as better management for power companies – they must operate strictly commercially. Proper regulations should also speed up projects and attract private institutional capitals.

"

Amadou Hott

My aim for the entire African population to access cheap energy as part of a large market of electrical power exchanges. This market shall be integrated and harmonised at each level of regional community and produce clean energy with the help of a dynamic private-public partnership.

Sean Thomas

Roger Hounkanrin

It is vital to develop decentralised solutions that make use of sustainable energy resources such as wind, solar, biomass. With progress in battery storage and fuel cells I believe we have to re-think the existing model.

Vera Songwe

((

It is vital to develop decentralised solutions that make use of sustainable energy resources such as wind, solar, biomass. With progress in battery storage and fuel cells I believe we have to re-think the existing model.

Youba Sokona

The sector is decentralising more and more. Projects tend to use close proximity networks, notably in developing domestic solar power systems. Large infrastructure projects aim at meeting industrial needs.

Deploying the energy field is essential to development in general. Projects need ever growing funding, especially in their study phase. Putting an emphasis on supporting interconnected projects would allow sharing financial means as well as risks.

Ekolan Alain Etty

The future of energy in Africa is dependent on how quickly we can deploy an off-grid solution for most african countries . There is a need for massive investment in energy infrastructure and this can be done with the right policies to make the atmosphere conducive for investors.

Dayo Adeshina

Accessing energy is an essential component of any economic, social and political development. Africa's future can only be attained through good governance of the territory's energetic resources, interdependence and community of interest among all African countries.

Mahaman Laouan Gaya

The African energy sector is a true development opportunity in and of itself. It's also a levering agent for all the continental potentials and legitimate regional integration.

Bakkoury Mustapha

Financial guarantees are crucial to deploying energetic infrastructures in Africa. Setting up a guarantee fund would reassure investors and entice them to invest more in the region.

Hassanein Hiridjee

Africa has the potentials for an incredible energy future. But we must be realistic as to harness this potentials. Regulations, Financing, Regions/Continental corporations, Geopolitical stability and Governance are issues amongst others that might affect this energy future for Africa. We must look for common solutions to these problems at the regional and continental level to help attain this vision.

Anne Etoke

I would like to state that the biggest challenge to really getting power projects completed in Africa is a lack of political and government will. In Africa, we have a saying: "to be in power, you need to give power", but that idea never seems to last longer than a political campaign. Don't get me wrong, some leaders in Africa are doing great things, we simply wish more could follow suit, and with a greater sense of urgency.

To catalyse the rollout of new clean power projects by ensuring that by 2030, over 50% of Africa's population has access to affordable power.

Jasandra Nyker Femi Adeyemo ³³

ABOUT



ENGIE is a global energy player and an expert operator in the three businesses of electricity, natural gas and energy services. The Group develops its businesses around a model based on responsible growth to take on the major challenges of energy's transition to a low-carbon economy: access to sustainable energy, climate-change mitigation and adaptation, security of supply and the rational use of resources.



The World Bank Group is one of the world's largest sources of funding and knowledge for developing countries. Its five institutions share a commitment to reducing poverty, increasing shared prosperity, and promoting sustainable development.

It was created in 1944 and is located in Washington. The World Bank accounts for 10000 agents dispatched in more than 120 offices in the entire world.

-INSTITUT-CHOISEUL

The Choiseul Institute is an independent think tank dedicated to analysing international strategic questions and world economic leadership.

Choiseul is a place to meet and exchange and creates dialogue spaces where the political, institutional, economic and idealistic sphere meet. That way, we nurture debates on the contemporary problematics.

Institut Choiseul www.choiseul.info