AREi
Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

OFFICIAL OPENING & PANELS

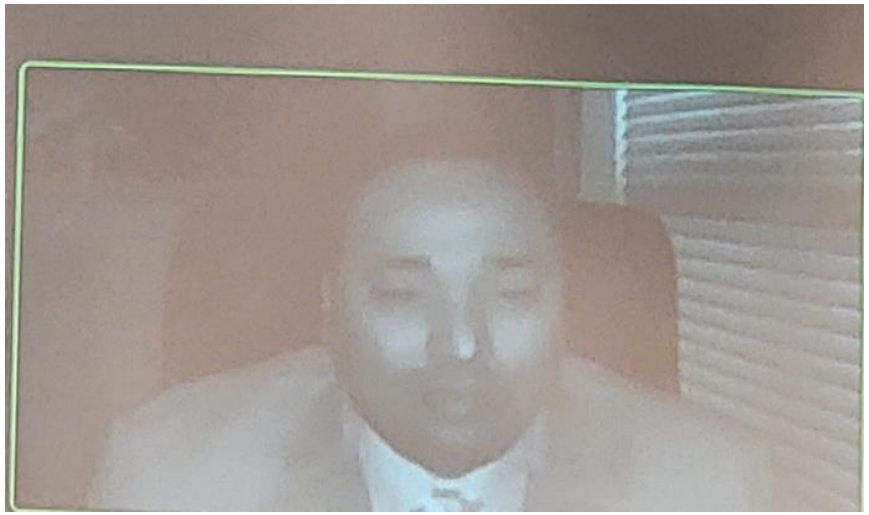
OCTOBER, 12 2022

MOROCCO - Casablanca

www.arei.info

PRE-COP 27

OFFICIAL OPENING



H.E. Mr. Yonis Ali GUEDI
Minister of Energy and natural resources Djibouti
(Virtual)

Mme Cécile Avizou Director of North Africa, AFD

Dr. Roberto RIDOLFI - Moderator

Mr. Abdullatif Bardach Chairman of the National Electricity Regulatory Authority, Morocco

Dr Mohamed OMRAN CT Member of the North Africa Region

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

OFFICIAL OPENING

His Excellency the Minister of Energy, in charge of Natural Resources, Mr. Yonis Ali GUEDI,
during the opening of the AREI meetings drew attention to the vital importance and relevance
of the theme on private sector investments in renewable energies in Africa
by specifying that the use of the private sector is in line with the Presidential Vision and is fully in line with
in the social project and in the policy driven by
the Head of State of Djibouti, His Excellency Mr. Ismail Omar Guelleh.

The private sector is an important driver of sustainable economic growth and development
inclusive in any country.
Resorting to the private sector in the construction of large-scale energy infrastructures is accompanied by
the many advantages, in particular the mobilization of substantial funding;
deployment of the most advanced technologies; offering good value for money;
compliance with set deadlines and on-time delivery of the works constructed, as well as the efficiency
and efficiency in the operation of the buildings constructed.

Through the strengthening of the private sector in economic structures, particularly energy,
the aim is to enable this sector to fully play its role, alongside the public sector,
in the dynamics of the quest for an economic and social development of our country with the
expected effects, the achievement of more economic growth, the creation of more jobs and
the improvement of the living conditions of the populations.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

However, to attract private sector investment in the renewable energy sector in Africa and thus reduce the risks incurred by private investors, it is imperative:

-to maintain peace as well as political and institutional stability within African countries;

-to liberalize the energy production market in Africa in order to allow the private sector to invest in the huge renewable energy potential of African countries;

- to initiate all the necessary reforms in order to further improve the business climate, by providing all the necessary guarantees and by creating a secure and attractive environment for foreign private investors;

-strengthen the legal, legal and regulatory provisions protecting investments the private sector;

- to respect or enforce the agreements made;

-And above all to reduce the exchange risk through monetary stability.

In conclusion, we all know that in view of the heavy investments to be deployed in the energy sector in general and in the development of renewable energies in particular, **the State budget alone is not enough, hence the need to call on to the private sector**.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

PANEL 1

How to Facilitate and Succeed – Private Sector Investment in Renewable Energy in Africa (Risk Mitigation)

OCTOBER, 12 2022

MOROCCO- Casablanca

www.arei.info

PRE-COP 27

H.E. Mr. Yonis Ali GUEDI Minister of Energy and Natural Resources, Djibouti (virtual)

Mrs. Cécile Avizou Director North Africa, AFD

Dr. John Mutua Acting Director, Economic Regulation and Strategy of the Authority of Petroleum and Energy Regulator (EPRA), Kenya. (virtual)

Dr Mohamed OMRAN Member of the North Africa Region TC

Mr. Abdullatif Bardach Chairman of the National Electricity Regulatory Authority Morocco

Mr. Sherif Zoheir Head of Central Electricity Market Department, Egyptian Electricity Utilities Regulatory and Protection Agency of consumers , EGYPT

Mr. Asheque Moyeed Islamic Development Bank Saudi Arabia (virtual)

Dr. Roberto RIDOLFI - Moderator

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Welcome from the Acting Director of the IDU, member of the Technical Committee – West Africa Region

Thank you all for having responded to this AREI meeting which aims above all to be a tool for all the focal points of our African continent.
Thank you to the Minister His Excellency Mr. Yonis Ali GUEDI - Minister of Energy and Natural Resources, Djibouti*. Thank you for giving us your time and thank you for your commitment to stay until the end of the interventions in order to be able to bring the final word. There you go, thanks again. This meeting has a rather special format, as you can see, we are not very numerous in the room but everything will be transcribed and broadcast on our website and on our communication tools so that the focal points in the different countries , our ambassadors can understand the importance of the different tools made available to them equitably by the partners for the private sector.*

We need the private sector, we need the technical aspects, but we also need political commitment*, and that's why every time we hold platforms, workshops, meetings or forums, we always ask that there be political representatives so that they can then be the echo with their counterparts in the commitment which is the role of politics to allow the private sector to fully play its role.*

We have 2 countries in North Africa which are models for us and we thank their presence currently in the room through Mr. Abdullatif Bardach, President of the National Electricity Regulatory Authority for Morocco and Mr. Sherif Zoheir Head of the Central Electricity Market Department for Egypt.

MOROCCO and EGYPT are 2 models for the entire continent in terms of private sector investment in renewable energy.
Their commitment to the planet is a reality, but even more their commitment to the population.
I take this opportunity to thank our partners and France present this morning and represented today by AFD through Mrs. Cécile AVIZOU with Proparco,

I thank the consultants in particular Doctor Roberto Ridolfi, Doctor Omran now pillars of AREI.
I thank the implication of the members of the Technical Committee present in particular the engineer Gitonga who represents East Africa and member of the technical committee.
As well as the members of the online technical committee, including the engineer Béatrice who is in charge of Chad and Central Africa, and you have Doctor Alfredo Hengari, who is in charge of Southern Africa; ;

"A good team is not just a good captain or a good goalkeeper. »

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Opening of Panel 1 : How to Facilitate and Succeed – Private Sector Investment in Renewable Energy in Africa (Risk Mitigation)

Moderator : Dr. Roberto RIDOLFI

While private sources are set to play an increasingly important role in financing clean energy projects in Africa, the low returns achieved so far by private sector investors mean that a substantial share of spending will have to be covered by public sources. Therefore, specific measures and financial instruments should be adopted to enhance the economic viability of projects and their attractiveness to potential investors by mitigating project risks. Public financial institutions should stimulate cooperation with private lenders, in order to move from direct financing to a broader strategy of risk mitigation.
The main question is: **what are the tools for preparing renewable energy projects: how to prepare successful renewable energy projects in Africa?**
The scene was set around the questions posed to the project developer: The first question for any company is to know **WHY the project is necessary or desired? This question is very often linked to the very essence of the project. What economic sector are the projects addressing? WHO are the final beneficiaries of the project results? What are the needs of the final beneficiaries being served? What are the DEADLY ASSUMPTIONS or fatal flaws of a project? fundamental market opportunities and challenges that create the conditions for success, including depending on the chosen technology? role of the OFFTAKER?**

Designing a good project also means planning and designing wisely the implementation, procurement and financing issues related to the management of operations. Financing renewable energy projects can be very complex and must be done in stages. Project financing is a discipline in its own right, which is why the panel only covered the essentials.

Finally, considerations about the teams and partnerships that are essential. Labor before, during and after construction is a major concern.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Mrs Cécile Avizou , Regional Director of Proparco for North Africa, based in Casablanca and covering the development of Proparco's activities from Morocco to Egypt.

Proparco is the private sector development subsidiary of the French Development Agency, which is a group that has 3 entities, the French Development Agency, which is responsible for supporting the public sector in its development projects but also in the development of its own public policies, Proparco for private sector financing and a 3rd entity which is an entity called French expertise which is in fact an entity of experts that supports the development of projects through the implementation technical assistance programs.

Since 2016, around 11 billion euros have been financed. Proparco is very committed to the fight against climate change, the financing of projects related to renewable energies and adaptation to climate change.

We have many ambitions for the development of renewable energies.
technical risks are generally addressed through strong feasibility studies over a long period.

It all depends of course on the nature of the technology used, but for wind power plants, for example, we are going to carry out studies, particularly environmental ones, which will take place over more than a year and even several years to ensure that we the wind speed. **Therefore, preliminary studies are important.**

Then, the financiers will also ensure the analogy between the currency of payment of the offtake contract and the currency also of the debt**. In any case from the point of view of a lender, it is essential to have this match potentially with guarantees, guarantees also provided on transferability and convertibility.**

Issues also linked to the risk of changes in regulations must, from our point of view as financiers, be supported by governments. So **a regulatory change that would take place on the ability to be reimbursed in the currency and will have to be covered by an indemnity provided by the government.**

My message through this is that in fact it is also important to go step by step, to work with all the stakeholders involved in these projects.

I think it's also important to understand that these are programs that develop over the long term, that ***there are indeed examples of the success of this type of program. But the countries that commit to this type of path must also go step by step****, that is to say that what we also see in Egypt is that this Feeding Time 2 program which was a real success and that the following programs and the plants that have been developed following, the PPAs that have been signed following this project.*

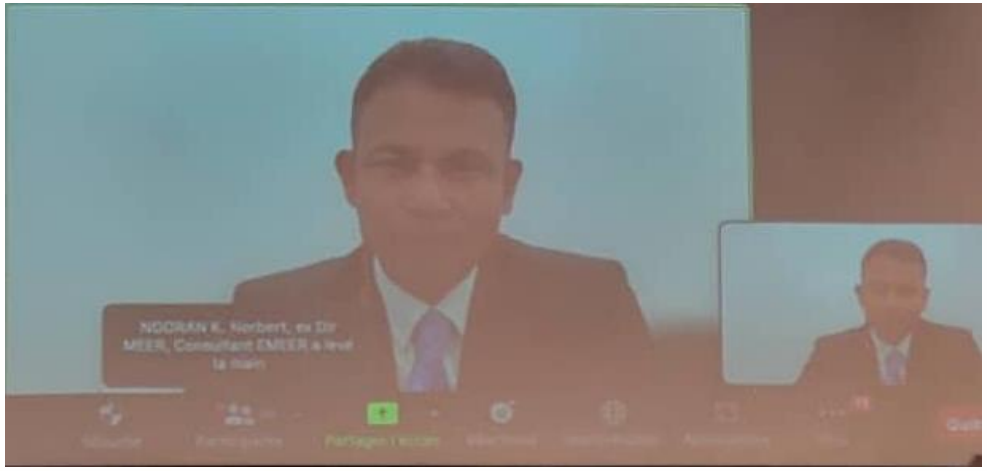
I think that the countries which today engage in ambitious programs for the development of renewable energies must go there with a first program which will give rise to a 2nd program and therefore to a perception of the risk which will be better apprehended by the private sector. .

From the point of view of payers, our role is indeed to take risks. A risk of course, which is able to ensure that we have a good allocation of the risk between the public part, the private part and us also to be able to provide financing which will be facilitators in the development of these programs.

*But also, to bring the banks to be able to finance these projects and we do it directly with financing and technical support programs for local commercial banks to either allow them to go for long periods, or train them in the to analyse****.***

"Risk decreases with success"

Interventions Online



M. Asheque Moyeed
Islamic Development Bank - Saudi Arabia

M. Asheque Moyeed , I work in the private sector, a structure called ICD, and we do part of the larger Islamic Development Bank Group where the Islamic Development Bank is our largest shareholder and we are part of the same group.

The Islamic Development Bank has been generally active in all its member countries and we have carried out a number of activities in the field of renewable energies, in particular these last years. And in our experience, what we've seen is that **success really starts from a generally top-down approach where, at the end, as soon as you involve the private sector or even the public sector, it has to there is a clear understanding of who is going to pay and when that payment is going to occur.**

So even if you do it under a PPP, someone will have to pay. The question is whether that someone is the end user or whether it is the government through budget allocation or a combination of both.

In many of our member countries, we have found that the monetization system is such that transmission and distribution companies are not necessarily able to pass on all production costs to end users. So often there is a deficit where full cost recovery is not being done and so it becomes very important that the government step in and there is a contractual mechanism to fill the void basically to pay for it. What we have seen is that there has been a huge increase in the use of solar and wind energy.

In the end, I think the good news is **that there is no shortage of funding once projects are well prepared. Project preparation is key. It's sort of the riskiest part of capital.**

The public sector and donor agencies have an important role to play in the readiness process.

This includes helping with site identification, measuring some resource data, especially for wind, for solar steel, satellite data is quite good for wind, energy specific data location, at least for twelve months, but preferably for longer, are very useful.

Then ENS regulations, environmental, social and resettlement frameworks, those initial assessments are extremely important in terms of risk allocation. And since most of the time power buyers are not financially viable, government guarantee becomes inevitable and related regulations, along with planning and approvals, become very important.

Mr. Abdullatif Bardach believes that there is material on which we can work together. It's a bit like the Moroccan experience on renewable energies.

Admittedly, we are going to talk about the Moroccan experience, but I want to reintroduce the regulatory authority a little. **I was honored to be appointed by Her Majesty four years ago as the first Chairman of the National Electricity Regulatory Authority.** But before that, I worked at the National Electricity Office for 30 years where I held several positions of responsibility, particularly in transport, for more than 20 years. Our theme you have mentioned it well in your various presentations **"The most important thing in investments is leadership"**

A royal vision which, since the Assises de l'énergie which took place in Oujda in 2009, our sovereign has shown us the way. It's really going towards renewables. **We have significant renewable energy potential today and we need to reduce foreign dependence on anything combustible.**

Leadership vision and political ambition.

The course is shown and since then all the institutions have been working hard to really implement this royal vision and really have more than 52% of our energy mix from renewable energies Today we have in gigawatts of installed capacity four gigas and already renewables, so 37% of installed power and already renewables. And the objective is to have more than 52% renewable by 2030 and that cannot be translated.

If we can't give visibility, if we don't have transparency, we can't have bankable projects. *Hence the Regulatory Authority should have all the tools to provide transparency and visibility to all investors, both national and international.* ***This is one of the two roles of the regulator. Today, regulation in Morocco deals with electricity.***

There is the amendment of the law which will be extended to gas activities in particular. So it's the Energy Regulatory Authority. Once the legislator passes the law, that's when we will extend the activity to gas as well. ***So the three governing bodies of our authority are the board the president and the various bylaw committees****.*

We are financially and decisively independent, We report to Parliament. So there are the members of the Council represented by nine members.

Three were appointed by the head of government, three by the president, the first chamber and three by the president of the chamber.
And we also have the dispute resolution committee. ***If there is a dispute between a private operator and a public operator, it can refer to the regulatory authority to rule and possibly impose sanctions****. And this settlement committee, which is very important, is chaired by a judge from the Court of Cassation. This shows the importance that the legislator gives to this authority so that it is truly independent and gives all the visibility that the investor needs.*

We will now begin discussions with AREI members to find out how to collaborate with this initiative for Africa.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Dr. Mohamed Moussa Omran

Technical Committee Member – North Africa Region

I would like to say that Africa is the solution, the solution for Africa in terms of energy and also for Europe.

What we have done and the result in Egypt shows our risk taking and that is why we have achieved what we have achieved now in renewable energy in Egypt. And we are ready to expand our experience. ***Egypt can do peer-to-peer cooperation.***

Morocco can do it and we can do it together. And you can do it with AREI. And I count on AREI to take into account the rules and regulations. If we can do it together, Egypt in Morocco with AREI, we can do a lot in Africa. ***Investment in renewable energy projects needs an enabling environment and financial attraction to fund potential projects.***

These funds depend on the credibility of the institution that develops and implements renewable energy policies. This is where the great importance of energy regulation in Africa comes in to encourage private sector investment and to address the various challenges and risks faced by renewable energy projects and to set the frameworks. most appropriate regulations, the system of incentives, the rule of the different stakeholders, the financial instrument and how to mobilize these financial and natural resources.

To attract private investment, it is very important to invest. Private investment is very important not only for Europe, but also for African countries.

If we can attract the private sector, I think we will solve the problem. Investments in clean energy infrastructure will need to be increased significantly in the coming years to support the broader development, economic and climate agenda by giving strength to public finances.

Egypt's electricity sector has begun its transition to low-carbon electricity sources. It is essentially based on the exploration and renovation of energy resources and contributes significantly to improving energy efficiency, security of electricity supply and reducing emissions. All the successes achieved by the electricity sector are due to regulation.

The Egyptian electricity market is now governed by the Electricity Law and its Executive Regulation which aims to liberalize the electricity reduction and distribution market, encourage private investment in the energy. Over the past 18 months, Egypt has created federal regulations aimed at increasing private sector participation in the electricity sector and diversifying the energy sector.

*In the coming period**, it is urgent and necessary to establish rules for the production, use and transport of hydrogen, especially with regard to safety. It is very important, before working in the field of hydrogen, to have safe regulations and regulations for production and transport.***

*To conclude, we need a series of policy interventions to enable a transition and Africa can be the world leader in energy and regulation, the bottleneck**.***

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Mr. Sherif Zoheir
Head of the Central Electricity Market Department,
EGYPT

I am very happy to participate in this event and I will try to illustrate a little the Egyptian experience to facilitate and succeed private sector investment in renewable energies.

We were confronted in August 2014 with a shortage of production and we were confronted with a lot of low shading. This is the situation before the increase in the shadow of renewable energies and the start of the restructuring of the electricity sector, which is also accompanied by a huge investment plan to increase the capacity of the Egyptian network.

One of our high investment cost success stories to avoid all renewable energy investment costs is the Banban Solar Park.

Two major challenges: The first part to increase renewable energy and private sector investment in renewable energy. **We have solved the problem of investment or huge investment cost by providing attractive feed tariff for investors.** The second problem that Egypt has faced is that of huge subsidies, especially for the residential sector, but also for some agricultural and industrial enterprises.

Dr. John Mutual
Acting Director of Energy and Petroleum Regulatory Authority (EPRA) Kenya

I am the Acting Regulator Director of the Energy and Petroleum Authority in Kenya.

Our main function is to provide technical and economic regulation for electricity, renewables and downstream costs, as well as for the petroleum sectors, but for this purpose we focus more on electricity.

Kenya is therefore not a very large country in terms of installed energy. But right now we have about three gigawatt hours, or 3,000 MW, for a demand of about 2,117 MW. We've seen strong growth over the past four or five years, with capacity and demand increasing by more than 20% overall. ***We have a list of our own government plan and that is important because it is the plan that guides how we should invest.***

And we undertake a 20-year plan, but we prepare five-year plans every five years and these plans are revised every two years.

We therefore hope to increase our solar capacity to between 5,000 and 9,000 MW by 2021. Regarding power supply and project implementation in Kenya, the country is currently using the following methods.

We have certain institutional frameworks that guide us. We have the development of strategic projects, which are carried out by national entities. ***We have a generation company, Kenjun Kenyan electricity company, which undertakes large base load projects.***

"Kenya is committed to providing an enabling environment for the private sector to invest in the country's and region's power grid. »

We do the risk taking on the rivers and most of the rural projects are done through what we call the Renewable Energy Corporation.
The other method of supply policy that guides us is the power pricing policy. ***Then we also have the public-private partnership below and we also have bilateral agreements. For example, we have bilateral agreements with Uganda and Ethiopia.*** We are one of the main controllers of electricity access and normally they source all the electricity from public entities and IPPs. And of course we have the guiding laws, you have the Public Procurement and Disposal Act, MIT and the PPP Act.

Visibility is very important and the projections of the least cost condominium plan guide on how the technical viability must be done and we also affirm that the project complies with the network code.

We have a network code for transmission, for distribution and also a code that covers compliance with an international project.

Demand risk is one of the areas that becomes a major challenge when it comes to developing projects in Africa, as you may find that the demand does not increase at the same time as the supply. So you need to make sure you keep balancing so you don't end up with overcapacity.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Some Images from Casablanca

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

PANEL 2

How to pitch a project and get financing: Successful financing of a renewable energy project in Africa

OCTOBER, 12 2022

MOROCCO - Casablanca

www.arei.info PRE-COP 27

M . Augustine Njamnshi , Continental Coordinator of the African Energy Coalition Sustainable And Access to Sustainable Development

Dr. Amgad Mohamed Said, Legal Advisor, Egypt

M. Rolf Bastiaanssen , Bax & Company, Value From Science And Technology

M. Nicolas Ritzenthaler , European Union

ING Jullus GITONGA CT Member of East Africa Region

Dr Roberto RIDOLFI - Moderator

M. Rolf Bastiaanssen,
Science et Technology Company

The presentation was very interesting as it identified the current challenges in European markets in terms of density of connections and absorption capacity of the distribution network.

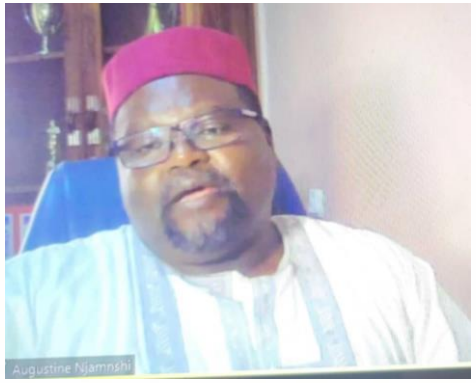
One approach is to provide buffer zones in city nodes where excess production can be stored.

Some of these problems could be avoided by African cities according to the "leapfrog" principle.

In general, the presentation raised signals about sustainability given the technical limitations of the network.

"Technical support and project standardization is a key factor in developing a mature project. »

Online Interventions



M . Augustine Njamnshi

Continental Coordinator of the African Coalition for Sustainable Energy and Access to Sustainable Development - Civil Society

Some risks are created by the project.

There are risks that come from the lack of communication.
Risks come from lack of information and this type of risk is higher than any other risk.

There is a distinction between just needs and quick repair.

The importance of involving communities can never be overstated.
It is an element that can make the success of a project. If a community is involved and united, solutions will be found.
Hence the call to ensure that the beneficiaries are clearly identified in a project and that success is human and not just technical success.

"Sometimes people are mistaken in thinking that the energy needs of local communities are lighting. Lighting is one of the last, there is cooking, drying, preservation…. »

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Dr. Amgad Mohamed Said

AREI plays an important role in creating a common ground for African countries to realize their interests. He also confirmed the intention of the Egyptian Ministry of Electricity and Renewable Energy to continue cooperating with AREI as one of the important platforms for cooperation with African countries.

The importance of involving communities can never be overstated.
It is an element that can make the success of a project. If a community is involved and united, solutions will be found. Hence the call to ensure that the beneficiaries are clearly identified in a project and that success is human and not just technical success.

Political leadership in Egypt has been the cornerstone of its energy revaluation as energy seen as a matter of national security. The political leadership has placed the issue of electric power at the heart of its agenda, because it is the means at our disposal for development in various fields of economic and social life.

Conclusion

AREI can play an important role in helping countries and governments to use peer-to-peer approaches and examples from African countries complemented by technical assistance from AREI partners.

The centrality of financial institutions and commercial banks is crucial to strengthen sustainable investment.

The heavy investments to be deployed in the energy sector in general and in the development of renewable energies in particular, the State budget alone is not enough, hence the need to appeal to the private sector.

It is mainly worth recalling here the main lessons and advice learned from the experience after the panel presentations:
- Increased emphasis on productive use and local capacity stimulates economic activity and supports small businesses.
- Tariff frameworks often do not take into account the additional costs that mini-grid developers have to bear.
- Many promoters also ensure that their systems are compatible with the national network in order to be able to switch to the electricity network.
- Integrated computer systems that enable usage data collection and remote monitoring of the network ensure that project developers can track operational capacity and maintenance needs.
- Almost all projects start with a grant, subsidy or other type of infrastructure financing to reduce investment costs.

- In most cases, a one-time connection fee is charged before the electricity is delivered.
- The most efficient payment method is pay-as-you-go (PAYG), where customers pay for energy in advance.
- The most financially viable mini-grids in the EEP portfolio use some form of the ABC strategy. A more stable and affordable electricity supply increases the revenue of the anchor customer and puts it back into the community.
- There is a need to sensitize and sufficiently inform local communities and businesses,
- A rapidly growing number of project developers are involved in the sale of devices and machines to customers.
- Recruiting and training a skilled and dedicated local team, as well as building strong community relationships, is a key success factor for the business model.
- A good quality PPA contract to define and secure project revenue streams, usually requiring the lessee to buy all or most of the electricity produced at a pre-determined price, reduces uncertainty.
- Certain forms of indexation, either to a hard currency and/or to inflation, to ensure the adequacy of income flows defined by the PPA can further reduce the exchange rate risk.
- There is a limit to the standardization of PPA IPP documents

The peer-to-peer approach to policy is useful because countries with significant previous experience with PPAs can seek to have that experience reflected in standard documents.

The valuable experiences of Egypt, Kenya (for English-speaking countries) and Morocco (for French-speaking countries) could be successfully deployed to share extremely valuable best practices on PIPs, legislation, infrastructure planning, etc. .

“Hydrogen is very well positioned in the vision of many African countries. »

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Some Images from Casablanca








#AREIMAROC

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

PANELS 3

Contribution of renewable energy to future skills and job creation

13th OCTOBER 2022
MOROCCO - Casablanca

www.arei.info PRE-COP 27

M. Daniel Wetzel, Lead author of the recent IEA Energy Employment Report

Eng. Maha Mostafa, Executive President of the Regional Center for Renewable Energy and Energy Efficiency (RCREEE)

M. Crispen Zana, Senior energy advisor, AUDA-NEPAD

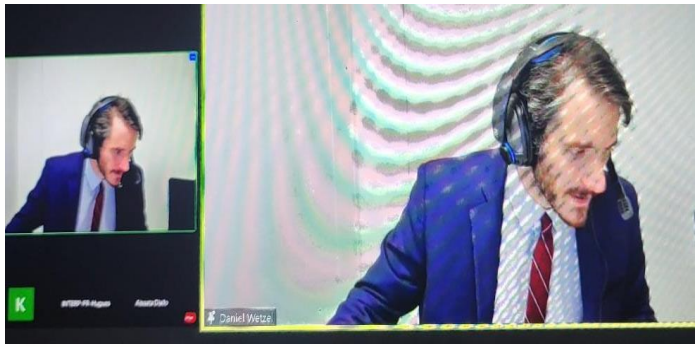
M. Fred Ishugah, Chief executive, Rural & Electrification and Renewable Energy Commission

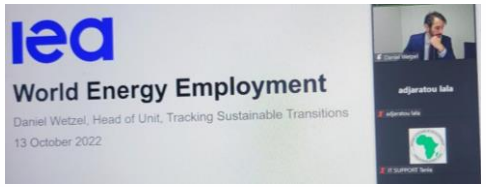
M. Al-Houssaine Bah , Islamic Development Bank

M. Florent SASSATELLI , France / AFD

Dr Mohamed BARAKAT - Modérateur

Interventions Online





M. Daniel Wetzel,
Main author of the recent IEA employment report on energy

Data on employment in the energy sector is essential to inform policymakers and businesses on how to seize the opportunities and challenges ahead.
As countries and companies accelerate clean energy transitions, employment in the energy sector is changing rapidly.

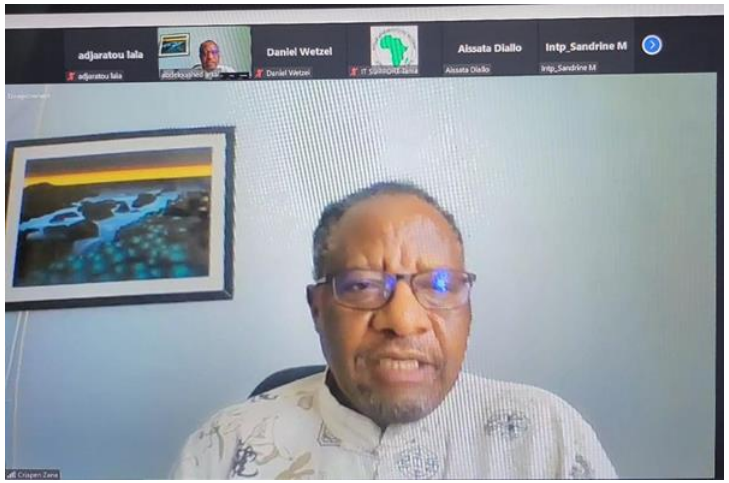
- **Train a skilled workforce to support the large-scale deployment of clean energy in the future**
- **Preparing Fossil Fuel Workers and Communities for the Transition**
- **Ensuring job quality in emerging clean energy segments**

About 2 million Africans are formally employed in the energy sector, representing about 0.5% of the labor force. Achieving universal access and meeting NDCs would require a massive expansion of clean energy jobs

The focus on energy skills is important for two main reasons:

First, higher skills bring better job quality to workers, especially in terms of wage advantages over non-energy jobs. Therefore, the distribution of skills within the energy value chain can help workers navigate career opportunities.

Second, the growing demand for energy workers and the energy transition require an increasingly skilled workforce. Mapping these skills gaps can help energy companies predict hiring challenges and training needs.



M. Crispen Zana,

The Job Creation Toolkit aims to maximize African jobs during the preparation, construction and operation of infrastructure projects in Africa. Using this toolkit, AUDA_NEPAD was able to develop employment maximization scenarios to test how different project inputs and national sources change the level and location of estimated employment, in addition to providing a range of policies, programs, process, etc. job maximization.

Eng. Maha Mostafa, Executive President of the Regional Center for Renewable Energy and Energy Efficiency (RCREEE)

The renewable energy value chain contains (i) product development and manufacturing (ii) planning, design, construction and installation, and (iii) operation and maintenance.

Each phase leads to direct employment, calculated by multiplying the employment factors with the respective physical quantities or monetary units.
Each phase also leads to indirect jobs along the value chain.

Innovative ideas and meeting more requirements of SDGs such as environmental, social and biodiversity... lead to the creation of more job opportunities, for example, “The Effective Turbine Management Project (ATMP), at wind farms in Egypt, which is a clear and successful example so It can be applied in other countries.

RCREEE is ready to provide his accumulated experiences, whether through training programs or the exchange of experiences between countries in cooperation with the International partnerships with financiers to satisfy the needs of African countries

There is still a mismatch between graduates and the labor market in the three countries examined. This extends to the renewable energy sectors, especially in regions where most solar and wind farms are located.

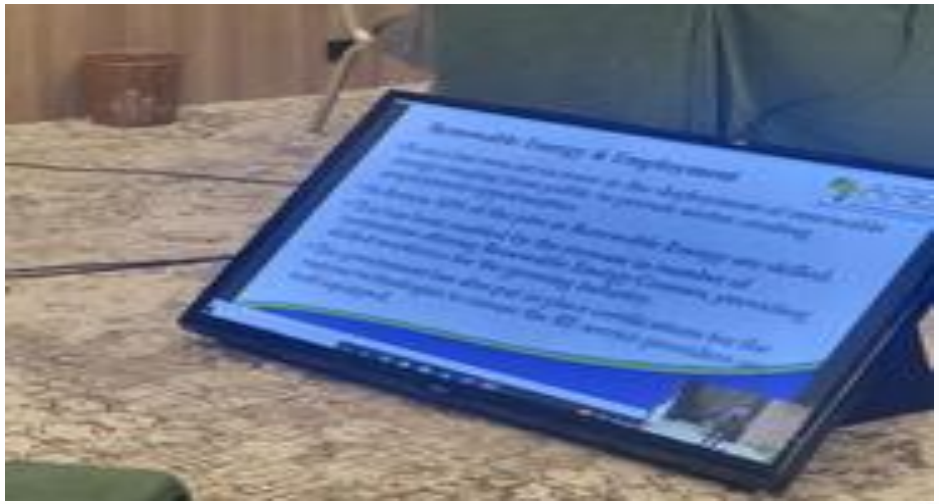
M. Al-Houssaine Bah , Islamic Development Bank

Renewable energies are a pillar of the Bank's policy.

Energy is a facilitating tool that can master the knowledge of the population. Job creation for the Bank is a cross-cutting element of all project components, particularly for youth and women employment.

There is a gap between market needs and qualified people ***so, it's important to provide the right education and skills.***

There is also a gap between urban and rural areas in terms of access to electricity and this gap should be closed.



M. Fred Ishugah, Chief executive, Rural & Electrification and Renewable Energy Commission

The renewable energy sector in Kenya created over 144,000 direct workers between 2019 and 2021.

Kenya has seen a pulse of economic growth with many opportunities for human well-being.
The direct employment of women has improved and their number has doubled.

Kenya has provided an enabling environment for accelerating renewable energy, including sufficient market capacity, training and education that helps build a skilled and versatile workforce.

With the increased adoption of renewable energy, the country has seen a continuous increase in job opportunities ranging from engineers to solar technicians.

M. Florent SASSATELLI

AFD/France

*"*As a very concrete example, AFD has been supporting the vocational training system of the Kingdom of Morocco for nearly 20 years and has financed a total of 9 institutes with management delegated to professional branches: IMA (aeronautics), IFMIA (automotive), IFMEREE (renewable energies and energy efficiency) and Casa Moda (textiles and fashion). The automotive, aeronautics and renewable energy sectors are part of Morocco's "global businesses" and are at the heart of the industrial acceleration strategy launched in April 2014, which confirmed the government's industrial ambitions. is given the objective of increasing the share of industry in GDP from 14% to 23% between 2014 and 2020.

Concerning more specifically the renewable energy sector and the question of skills, the Training Institutes for Renewable Energies and Energy Efficiency (IFMEREE) (via financing from AFD, the EU and the Kingdom of Morocco with a technical support from GIZ) are a concrete response to the issue of employment and skills development in support of an ambitious energy strategy that targeted a shift from 32% to 42% of renewable energy in Morocco's energy mix by 2020.

In this context, a sector study was conducted in 2011 to identify the short-term needs of the sector. It highlighted the creation of 50,000 jobs over 10 years with a training need for 47,000 people, including 13,000 in renewable energy. Morocco's energy strategy should also be accompanied by legislative and incentive measures to support the development of an ecosystem of public and private actors and investments.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

M. Florent SASSATELLI
AFD/France

“This analysis led to the creation of 3 IFMEREE whose management is delegated to the actors of the sectors (MASEN, AMEE, ONEE, FENELEC and FIMME) including two professional branches. This is a PPP in vocational training at the service of business competitiveness and support for the country's industrial and strategic policies.

This provision of a training tool at the service of companies in a sector, based on anticipating human capital needs and the need to support the development of skills of workers in a sector (training logic continues throughout life) has made it possible to respond to a triple problem: (1) adequacy between the training offer and the needs of the sector; (ii) provision of well-trained human resources in sufficient quantity to support investments in the sector; (iii) the development of continuous training to support the development of professional practices and employees in the sector; (iv) the involvement of economic actors in the governance of training centers for quality assurance of content and the training card. »

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

***Moderator*: Dr. Ahmed BARAKAT**

Conclusion panel 3 : **Contribution of renewable energy to future skills and job creation**

The future of renewable energy is quite bright, with increased adoption of the technology creates a large pool of employment opportunities.

Jobs are a tangible benefit that gives people a stake in the energy transformation, and therefore promises to increase its political acceptance.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Some Images from Casablanca

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

PANEL 4

Digitalization of Renewables Energies

13th OCTOBER 2022

MOROCCO - Casablanca

www.arei.info

PRE-COP 27

Mrs. Vida ROZITE - *Expert in digitalization in the energy sector*

Mrs. Kornelia LIPINGE - *SACREEE*

Mr. Crispen Zana - *Senior Energy Advisor, AUDA-NEPAD*

Dr. Mohamed Moussa Omran - *AREI CT Member, North Africa Region*

Dr. Augustine Njamnshi - *Continental Coordinator of the African Coalition for Access to Sustainable Energy*

Mr. Al-Houssaine Bah - *Islamic Development Bank*

ENG . Jullus GITONGA - *AREI CT Member East Africa Region*

Dr. BARAKAT Ahmed - Moderator

Interventions Online

Mrs. Vida ROZITE ,
IEA

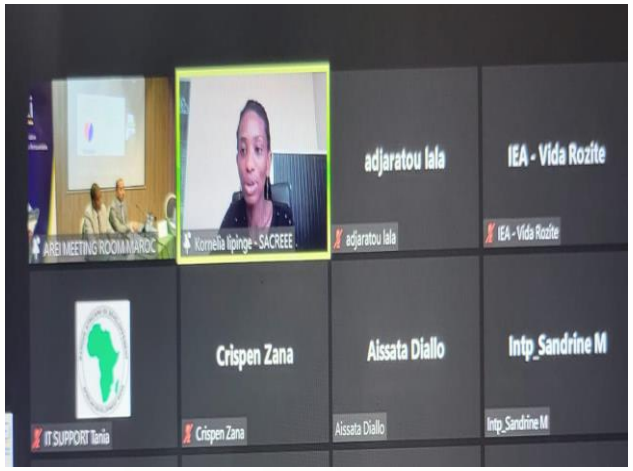
Digitization plays a key role in supporting resilience to decarbonization of the power system, especially in developing and emerging countries

We need policies, regulations, new business models to enable digitization, to solve our challenges

Most importantly, we need to strengthen our capabilities to source and exploit technologies that meet our current needs, but also enable us to meet future needs.

“Africa will be the digitalization hub for the clean energy transition. »

Interventions Online

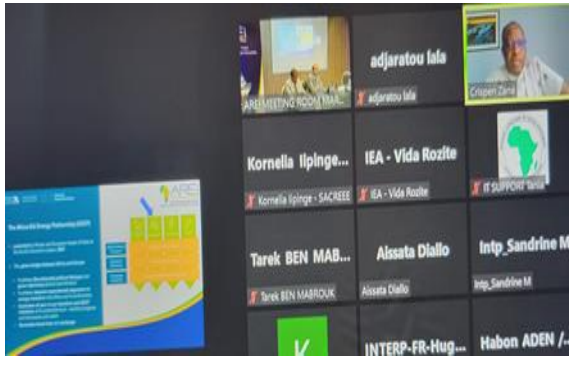


Mrs. Kornelia LIPINGE ,
SACREE

The need to digitize the energy system and renewable energy systems came from:

- Increase the penetration of renewables into the power system and manage grid integration challenges ;
- The need to accelerate access to energy ;
- Impact of COVID-19 which showed that; the use of digital tools could create resilience as the reliance of utility operations and maintenance on personnel traveling to the site to inspect and maintain equipment was exposed as a risk and for mitigate this risk, utilities must do so ;
- The desire to use remote supervision via on-site cameras or drones on construction sites to avoid unnecessary travel, and
- adopting smart grid technology to control and operate power grids with minimal on-site operator intervention.

Interventions Online



Mr. Crispen Zana
Senior Energy Advisor

Data in Africa is a challenge. But I can promise you that with the African Energy Commission that they are doing now, in the future we will have a very good source of data.

digitization should not only be about hardware, but let's look at:

How do we plan and how will digitization support us?

Digitization creates more flexibility in electricity supply, such as smart meters where the system of prepaid tokens for electricity supply Advance purchase of electricity for household use for any amount.

Digitization makes power supply affordable and easily purchased from anywhere through mobile money.

Digitization makes it easier to manage the grid's variable renewable energy supply.

ENG Julius GITONGA
AREI CT Member East Africa Region

It is easier for the Bank to grant a concessional loan when it comes to developing a project in the social sector more than in the private sector.

He advised the AREI focal points to contact the country and the bank if they have a project, they should send the request, and do an analysis, and see what kind of project can be implemented in collaboration with AREI.

The Islamic Development Bank is ready to support countries and communities if they are not members of the Bank.

Mr. Al-Houssaine Bah
Islamic Development Bank

Digitalization is impacting the entire energy value chain, from generation to transmission, distribution and demand.

It can also help integrate the growing share of renewables by providing flexible power systems that offer demand-side solutions and energy storage, including for hard to decarbonize sectors.

The digitization of energy begins where energy begins: *in power plants. Operators can use innovative software allowing them to intervene upstream, before damage occurs such as predictive maintenance.*

Dr. Mohamed Moussa Omran,
CT Member of the North Africa Region

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Conclusion du Panel 4 : La digitalisation des énergies renouvelables

Moderator : *Dr. Ahmed BARAKAT*

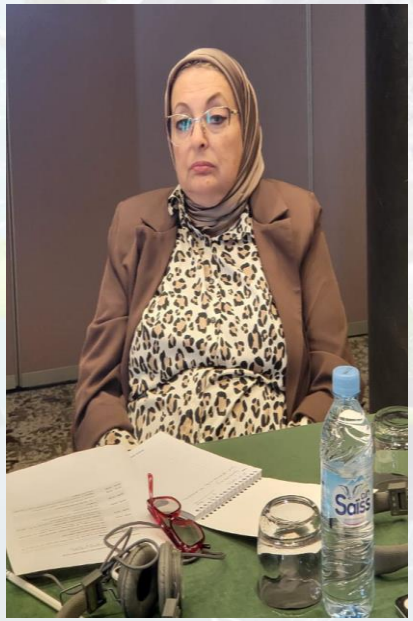
The energy sector is now in a profound transition towards a very important energy transformation, and digitization is one of the main enablers to ensure its realization.

The continued expansion of decent jobs in renewable energy requires a comprehensive approach including deployment, integration and enabling policies, as well as industrial policies, education and vocational training, labor market measures, diversity and inclusion strategies, and regional revitalization and social protection measures.

The next step should be to bring countries together to learn from each other, as there is a lot going on on the continent.

Africa Renewable Energy Initiative
Initiative Africaine pour les Énergies Renouvelables

Some Images from Casablanca



#AREIMAROC