

## ***The Second Japan-Africa Business Forum***

### ***Session 2 Energy and Power: Universal Access by 2025***

***Moderator  
Vincent Nmehielle  
Secretary General – African Development Bank***

*Mr. Nmehielle* began by stating that over 640 million Africans have no access to energy which corresponds to 60% of the population which is the highest level of people without electricity in the world. The per capita consumption of energy in Sub-Saharan Africa, excluding South Africa, is 180 kilowatt hours compared to 13,000 per capita in the United States and 7800 kilowatts hour in Japan.

Electricity is needed for virtually everything. There are all kinds of ways of getting electricity; solar, hydro, geothermal, gas and coal. The question is how all these avenues for accessing electricity will realize the African vision of universal access to electricity by 2025.

This panel will contextually address the following critical and overarching questions.

How can the public and private sectors in Africa and Japan overcome the constraints and re-seize the enormous opportunities in the energy and power sectors of Africa to achieve universal access to electricity by 2025?

What are Japan's expectations of Africa, including business seeking an appropriate energy mix to secure the base load and additional power generation while paying attention to environmental considerations?

How can Japan assist with the realization of these expectations and how can Africa facilitate it?

What are the key issues and challenges regarding legal and regulatory frameworks for successful arrangements in the energy and power sector, including those for IPPs and PPAs?

How African states are going to cope with these issues and challenges?

What financial instruments are available and how can the Japanese private sector access funds for power projects, including small off-grid projects?

***Ken Kageyama  
General Manager IIP & IWPP Department Number 2, Sumitomo Corporation***

*Mr. Kageyama* started by briefly explaining about his company and company's business activities in the power sector in Africa, especially about the IPP project in Ghana.

Sumitomo Corporation was established in 1919 in 66 nations of the world, with a network of 130 places and an investment in close to 900 companies.

Sumitomo is a general trading company with an environmental infrastructure business unit, including power, communication, industrial complexes, IT logistics and finances leveraged.

Sumitomo is engaged in diverse trade and business sectors. It focuses from medium-to-longer term perspective on Africa as an area for expansion with a high-growth potential. In South Africa, Sumitomo has constructed and is operating 100 million megawatt wind-power power generator.

The first natural gas-fired combined thermal plant 240 megawatt in Tanzania and in Mozambique, a gas-fired combined thermal power plant 110 megawatts and in Tunisia – in the Republic of Tunisia, 450 megawatt gas-fired combined thermal power plant is what Sumitomo received orders for. In the Sub-Sahara, by 2040 it is said that the power demand there will be about six fold of the present level. On Sumitomo's part, it wanted to constructively and positively contribute to the development of the whole of Africa, including Sub-Sahara.

Sumitomo acquired 28% stake in constructing 340 megawatt plant in Kpone district. The plant will be operated by Cenpower Generation Company. Sumitomo has 51% stake in the operation of the plant. The power generated will be distributed to up to 600,000 general households. Sumitomo will be commercially operating the plant for 20 years and sell power to electricity companies in Ghana. Seventy percent of the total project cost will be financed through Project Finance. The construction company is from South Africa. Most of the Project Finance will be financed through South African commercial lenders and leverage export financing in South Africa.

Other sponsors will be AFC, AIM and CHL which are African companies. This is the first African-led IPP Project. Other sponsors, African businesses and lenders want Sumitomo to provide knowhow regarding construction and operation of power plant as well as operation management, maintenance, inspection and the general support for a stable operation and smooth progress. Sumitomo will be sending Chief Technical Officer, Chief CFO and Project General Manager.

***Seishi Narita***

***General Manager, Power Business Department Number IV, Marubeni Corporation***

Marubeni Corporation has started the IPP business since 1994 and for more than 20 years has accumulated many track records all over the world. Currently the total capacity of IPP asset is around 40,000 megawatt gross basis and 12,000 megawatt net basis.

In Africa, in 1999, the financing closing for 471 megawatt was achieved through gas combined cycle power plant in Tunisia with JBIC Finance which is a fast-growing field IPP project in Africa and started the operation in 2002. Since then, for more than 15 years a stable operation and supply of reliable power to the electrical utility company in Tunisia has been continued.

Although the traditional market is Asia and Middle East, the IPP business needs to be expanded to Africa because PPA business model is international standard and the expertise can be applied to the African power sectors. There are offices in Johannesburg for development of power project. The two thermal Greenfield Power IPP projects in Sub-Saharan countries are not being implemented.

With the recent experience, there is a need to grow the IPP business activity in Africa. Marubeni also has a lot of renewable power projects all over the world and is pursuing this business opportunity to develop and invest in renewable IPP projects in Africa as well.

**Amadou Hott**  
**Vice President – Power, Energy, Climate Change and Green Growth**  
**African Development Bank**

Last year, President Adesina launched the new deal on energy for Africa in Davos, with the objective and ambition for Africa to achieve universal access by 2025 by making sure that over 200 million households have access to energy with an additional 160 gigawatts added to the grid in Africa.

The 200 million connections needed will be done via on-grid and off-grid solutions. That is why AfDB launched in March the off-grid revolution to help 75 million Africans get access to energy via mostly solar energy particularly in the rural areas. At the same time, 130 million households need to be connected via the grid. This can be achieved by adding gigawatts and also making sure that the utilities are creditworthy, reformed, governed properly, and that the business and regulatory environment, and the policies are in place to have cost reflective tariffs.

People, who use electricity, must pay for it, otherwise in the long run it will not be sustainable and it will be difficult to attract private sector into electricity. To achieve this ambition, AfDB will invest \$12 billion over the next 5 years. It has already invested 1.6 billion last year.

This year, AfDB will invest 2 billion and leverage from the private sector from other DFIs and in particular from Japan through the Japan-Africa Energy Initiative with \$6 billion for both private financing and public financing. AfDB looks forward to working with each and every one to help prepare project but also finance project, help make sure that the project on the ground provides results.

**Mateus Magala**  
**CEO, Electricidade de Moçambique, EDM**

*Mr. Magala* stated that Electricidade de Moçambique would be 40 years next August and is in the process of transformation. It has grown from 75 to 3000 megawatts and has about 3000 employees. The revenue has grown from 140 to 500 million and will be 1 billion by 2020.

EDM is a national utility providing integrated energy solutions from generation, transmission, distribution, and commercialization. EDM needs

to position itself along the whole value chain with a vision to make Mozambique to be able to provide universal access by 2030 and position itself as the regional hub in the Southern Africa. Over the next 10 years, EDM is looking to make about \$10 billion investment. Currently, EDM is connecting the country at the pace of 100,000 connections per year but to achieve universal access, possibly 300,000 or more connections per year need to be made.

**John Mudany**  
**Finance and ICT Director**  
**Kenya Electricity Generating Company Limited, KenGen**

*Mr. Mudany* informed that KenGen or Kenya Electricity Generating Company Limited was founded in 1959. It is 70% owned by the Government of Kenya and 30% listed in the Nairobi Securities Exchange with 193,000 shareholders with around 9% foreign investors. Currently, KenGen generates 1630 megawatts which is around the peak demand of 1650. KenGen has a general installed capacity of around 2300 megawatts with a mixed generation with geothermal, wind, hydro and thermal plants. Geothermal is the main one and is growing but hydro has the largest capacity at 821 megawatts.

In terms of universal access, the country is driving this with an increase in connections from 2 million customers in 2012 to just below 6 million customers. The country targets 70% access by this year, to achieve the universal access by 2020. This is being up-scaled through off-grid. There are 23 mini grids in the country.

Reduction in the cost of connection is being worked upon. Around 5 years ago, the average cost of connection was around US \$10,000 which has been reduced to around \$150 which has managed to spur up the connections. KenGen has a lot of dealings with Japan. JICA has been very supportive and has invested in Kenya just under US \$1 billion in the power generation in addition to other areas.

**Emad El Sewedy**  
**Group Chairman, El Sewedy Electrometer**

*Mr. Emad* stated that El Sewedy is a part of Zaki El Sewedy group, which has been in the electricity business for 80 years, starting with distribution of electrical materials, manufacturing of power cables, electricity distribution panels, street lighting, contracting as well as metering.

El Sewedy Electrometer was founded in 1998 to supply quality meters to utilities. Soon it was realized that the utilities were suffering from challenges in revenue collection, losses, network losses as well as a mismatch between supply and demand.

In 2001, El Sewedy decided to invest in prepayment metering solution to help utilities overcome those challenges. After Egypt, this solution was further implemented throughout Africa. One of the first projects was implemented in Comoros Islands funded by the Arab League to buy

generators. Since Comoros Islands did not have enough money to buy fuel and maintain the power generators, they asked El Sewedy to install metering solution to enable them to collect their revenue. After the success in Comoros Islands, El Sewedy expanded more in African countries of Ghana, Ethiopia and Zambia having factories and operations on ground. Soon after, it was realized that the challenge is not in technology but in implementation because utilities do not have team capable of managing those scaled rollouts.

El Sewedy started getting involved in taking over implementation and installation. With problems in operation and maintenance of the system, El Sewedy got involved with utilities in managing system, technology development, communication, software database and data centers. El Sewedy assisted in that and took over the operation as well. With the expansion and huge investments in the system, they did not have enough cash to expand the program, so El Sewedy started offering supplier credit to enable utilities to roll out massively on a bigger scale.

Now, El Sewedy is operating in eight countries around the world with 10 operations. El Sewedy believes that Africa will be developed by Africans in partnership, so Japanese companies can partner with African companies, who are on ground, to provide a total solution from generation down to collecting the revenue.

***Vincent Le Guennou***  
***Co-CEO and Managing Director***  
***Emerging Capital Partners, ECP, Private Equity***

*Mr. Vincent* stated that ECP is one of the leading private equity firms dedicated to the African Continent and has been operating since 2000. ECP has raised \$2.7 billion to invest in equity in more than 60 companies in 45 countries in Africa.

ECP has identified the power sector as an attractive investment destination and has overtaken the control of a company called *Eranove* in 2009. *Mr. Vincent* is the Chairman of the Company Board representing the majority and the controlling shareholder. *Eranove* is a French company owned by a French conglomerate Bouygues. *Eranove's* activities are exclusively on the African Continent.

*Eranove* has four key subsidiaries; two water companies of Senegal and Côte d'Ivoire. In Côte d'Ivoire, *Eranove* controls a vertically-integrated electricity company which is called *CIE*.

*CIE* operates 600 megawatt of hydro capacity and operates transmission and distribution system, which is a monopoly. ECP operates that system on behalf of the government. *Eranove* also controls an IPP in Ivory Coast called *CIPREL* with a 543 megawatt capacity which has been expanded by 200 megawatts and a 350 million euro financing. The African Development Bank has been part of that financing.

**Q&A**

Vincent Nmehielle stated that Sumitomo is involved in Africa in PPPs and questioned as to why Sumitomo has been so proactive in getting into Africa despite the fact that somehow Africa is perceived as a risk investment environment.

Ken Kageyama stated that Sumitomo Corporation has a level of business activities and the realization to attain a sustainable society makes it contribute to the improvement of power infrastructure to resolve the development challenges of Africa.

Sumitomo Corporation has 400 years of underlying development with the deeply-rooted spirit of benefit for self and others, private and public interests. Sumitomo's attitude is to grow along with the African society. In terms of improving power infrastructure, construction of power plants and operation of power businesses are the two entry points. Depending on the requests of other countries, Sumitomo provides appropriate solution.

The approach, which largely relies on public funds, cannot cover the voracious appetite for funds to resolve the solutions. A framework needs to be set up for the private investment to feel comfortable about investing. In countries, where private sectors actively invest can accelerate the growth of the country concerned and that is why Sumitomo participates in the IPP business.

Vincent Nmehielle asked about the strongest aspect of Marubeni's business investment in terms of PPP and technology in Africa other than capacity.

Seishi Narita stated that Marubeni's strengths of the IPP Project are the capability to develop, manage and materialize the project to meet the customer's need. For developing a project, Marubeni usually takes a lead developer role within the consortium and with a substantial investment for a long-term basis. Through its experience on the IPP Project world over, Marubeni has a good relationship and mutual trust with a lot of key stakeholders to make the project feasible, including the EPC contractor, OEM manufacturers and also the public finance institutions, private banks and strategic partners.

With this experience, Marubeni can coordinate and propose a best formation to the project which meets the requirements for each project by providing feasible and competitive solution to the client. From the execution stage, Marubeni played a lead role for managing the construction and operation maintenance of the power plant. It is through this experience that Marubeni has the knowhow, resource and the network to manage the project in an efficient way.

Vincent Nmehielle inquired about the role of private sector in enabling AfDB and Africa to achieve the universal access by 2025 relative to the investments being made on the African Continent with regards to energy.

Amadou Hott stated that the private sector should actually play a major role going forward. So far, the public sector has played the biggest role both on

the government and the multilateral development bank side. For example, in 2015 \$35 billion was invested in the energy sector in Africa but only \$7.5 billion came from the private sector. The banks want to work more with the private sector going forward and have created a new Vice Presidency that combines both public and private sector under one roof to make sure that the public sector funding is being critically used to attract massive private sector money.

About \$60 billion a year is needed for the next 10 years which neither the governments nor the multilateral development banks can provide. The private equity funds need to fund and take some of the risks that are required and bring in the development expertise as well. The African Development Bank can provide not only equity investments into private equity to leverage but also provide a project development funding.

AfDB has certain facilities like the SEFA that provides grant money to prepare renewable energy projects. The NEPAD-IPPF provides grant money to develop infrastructure project, including energy project. The Japan-Africa Energy Initiative has a trust fund window that provides development capital not only for clean core technology but also for other technologies.

The rule of the game should be to use the public money to provide guarantees and first-loss capital so that the private sector can really see their investment de-risked on the continent and there can be more investments. The institutional capital in the form of trillions of dollars are around the world looking for higher returns but those funds are risk averse because they are pension funds, sovereign wealth funds and so the investment needs to be de-risked so that those people can invest more in Africa.

Vincent Nmehielle asked how the partnership of Electricidade de Moçambique with Sumitomo Corporation had gone in terms of enabling the electricity environment in Mozambique and what kind of arraignment from legal and financial framework points of view were they able to generate with their partners.

Mateus Magala stated that the project they were doing with Sumitomo is 110 megawatts combined cycle gas project, which came about from an understanding that the electricity is an essential element for the development and transformation of the country. In 2014, Prime Minister Abe and President of Mozambique met and discussed that Mozambique needed to universalize energy for transformation and identified this project as it would create a lot of spinoffs in Maputo, close to industrial sites.

Mozambique had gas reserves and/or secured gas at that moment so there were off-takers on the other side who could strike at PPAs where credible. Within that framework, the Government of Japan thought that energy is not an end itself but a means for transformation, so it would be wise to invest in productive assets such as power plant and it was agreed to fund it on a concessional basis at the return of 0.01% over 40 years. A tender was launched within Japanese companies and Sumitomo successfully bid for the

project which will be commissioned next year in August and the construction will start after sometime.

Importantly, Mozambique needs energy. All the African countries have now realized that energy is a major development asset and the development of an energy project requires political will from leaders and community. There also needs to be an enabling environment that allows participation for both private and public sector to deliver that.

Mozambique has a low public-private partnership. IPP frameworks are attracted towards Mozambique. There are about five IPPs in development and one that underdevelopment and will be operational by 2022 is a 400 megawatt power plant. Other companies should approach and take advantage of such collaboration.

Vincent Nmehielle inquired if Kenya had found the mix of energy sources with multiple points of entry in hydro, geothermal and how beneficial was it. Also, as a public company listed with private investors, profit is the ultimate goal. From the viewpoint of price in electricity, has any social pricing been taken into account and how are the poor people catered to within the country whose contribution in terms of electricity purchase is minimal.

John Mudany stated that in terms of universal access, the country has taken several useful approaches like expanding the transmission network in the country and come to the level of expansion of the distribution network.

KenGen is also working together with the African Development Bank and other financiers in *The Last Mile* project where government targets 1 million new connections every year. This has been useful and has helped in increasing from 2 million connections in 2012 to just below 6 million customers which is slightly less than the target of 70% by 2017. The target is to attain 100% connection by 2020.

In terms of generation mix, Kenya is endowed with a lot of renewable resources. The geothermal potential is around 10,000 megawatts in the country. Gas is exploited at around 670 megawatts with a target of around 1200 within the next 2 years. It is projected to attain 720 megawatts by 2020, out of which 630 will be geothermal and around 90 will be wind. Kenya has 10,000 geothermal, 3000 megawatts of wind, with a lot of opportunities in the solar as it is on the equator.

KenGen really focused on geothermal because the level of cost of geothermal is much lower, at just between 7 to 8 US cents per kilowatt hour compared to 18 to 20 US cents per kilowatt hour of thermal. This has helped reduce the cost of fuel as there is lesser reliance on heavy fuel. KenGen has managed to actually reduce from 720 US cents per kilowatt hour of thermal to around 2.3 US cents per kilowatt hour.

The real focus is on the rural areas, where 90% of the population lives. The government uses subsidized mini grids and solar. A tariff of around 0.5% in the bills goes towards the rural areas and this has helped a lot. Through solar, the government has managed to connect around 23,000 schools,

markets and hospitals between 2013 and now from where they are able to reach that expansion in growth.

The other challenge was affordability because although the connections have increased, the demand has moved very slowly from around 1300 to 1600 megawatts. The government has reduced the cost of connections and also the unit cost of power for the rural folks through a graduated tariff which is less for the poor population and is subsidized by the higher end.

Vincent Nmehielle asked how the smart meter process had helped in foreseeing the universal access and what role do smart meter have in supply and management of the process?

Emad El Sewedy answered that El Sewedy provides solutions to manage utilities better because the problem is not technology or funding but rather how to recover investment. With respect to consumers who do not pay their bills because they do not want to pay for them as the monthly bill comes as a surprise without any alarms or any notice about the progress consumption, smart meters can actually provide a solution to such challenges.

Smart meters actually provide different billing ways, whether prepaid or postpaid, with access through the internet. Public awareness is a very important part of what the smart meter can provide. Additionally, smart meters protect the revenue in terms of anti-tampering or an alarm that utilities receive once there is tampering on the metering side. Smart meters can also help in managing the load of the consumers according to the available supply to avoid power cuts, especially to important utilities like hospitals. This is the importance of availability of smart meters.

Vincent Nmehielle questioned how difficult it was for businesses like ECP to have states as their clients and what roles can private equity firms play in terms of the critical need within the African private sector in collaboration with governments to provide electricity?

Vincent Le Guennou stated that ECP took over Eranove in 2009, because Bouygues, the multinational western company, did not want to focus anymore on utility in Africa. Trends like these have been seen in other places as well, like when the US power company AES decided to withdraw from the continent.

This has really provided private equity investors like ECP with an opportunity to invest in the sector. ECP took over 100% of Eranove but decided that African investors needed to be a part of the equation. ECP wanted to create a regional champion and decided to open up the capital structure to African investors in many ways.

ECP put in place a stock option plan allowing key managers, a group of 20 people essentially from Ivory Coast and Senegal, to collectively acquire 7% of Eranove. ECP allowed local African partners to invest in Eranove. Private investors have invested close to 10%. ECP allowed employees through the pension funds to take 10% of Eranove. More recently, ECP

allowed the Social Security Fund of Ivory Coast to take 5% of Eranove. Collectively, African investors have almost 30% which is fundamental as Africans need to be a part of the equation.

Even though the amounts at stake are big, ECP needs African investors in equity and capital structure of the companies. Over the last 8 years, ECP has developed the existing assets.

The biggest infrastructure project in Ivory Coast over the last 10 years has been the expansion of CIPREL by 200 megawatt by raising €350 million of capital. Building on the fantastic expertise and talents of engineers within the local companies, ECP exported their knowhow and developed a pipeline of project. Recently, ECP won a tender organized by the IFC to develop a hydro project of 42 megawatts in Mali. ECP won a water project contract organized by the World Bank in the DRC.

The key fundamental success factor in ECP's experience is the quality of the institutional framework and not dealing with the states/state or government. Ivory Coast has set up a clear definition of responsibilities where they have a regulator, state-owned agencies in charge of planning and development of the electricity sector and one critical element being the cash flow allocation.

The distribution company, which is part of Eranove, collects cash from the customers which is transparently allocated according to a waterfall with order of payments, so in priority CIE would pay itself and then pay on a pari-passu basis to all IPPs in the sector as well as gas and fuel suppliers. This provides a lot of comfort to all stakeholders. When there is an issue with tariffs, the DFIs can apply pressure on the government to help restore the financial sustainability of the sector.

Vincent Nmehielle invited questions from the floor and cyberspace.

Chiboni Evans, working with the South African Electrotechnical Export Council, which is a public-private partnership from South Africa with the Department of Trade and Industry, asked KenGen to elaborate on how the cost of connections was dropping. She stated that it was the first time ever to have an EPC contractor from Africa partly financed by the ECIC. She wanted to understand from Sumitomo how more and more African construction and EPC contracting companies could be created in the power sector.

Mark Ukeche, from private sector in Nigeria, questioned the Vice President of ADB about the energy mix and the cost reflective tariffs that were going to be used in making sure that things work in Nigeria and Africa, at least from now until 2025.

He stated that Nigeria has really worked well in terms of sanitizing its energy sector but the problem is inadequate power supply, problems with gas supply, transmission grid reinforcement and distribution network. Most importantly, the issue of metering processes has been a very big challenge.

With all these things in mind and with the percentage of equity that is going to be spent in the African continent, what is Nigeria going to get in order to help Nigerians solve their power problems.

S. Kuppuswamy, from India, questioned that amidst the hunger for physical power and the current ongoing trends for clean energy, can fossil fuels still play a role to play and what would be the policy of banks in supporting such projects in Africa particularly?

Ade Adefeko, Vice President of Olam, Nigeria, stated that he had heard a lot about investments being made in Tunisia, North Africa, or the Maghreb, but did not hear too much about Nigeria.

It is important and imperative to know that Nigeria is closer to 200 million people with power emergency. Nigeria has had power sector reforms for quite a while. It is important to know through this forum, where Japan and Africa are trying to talk about business to know what plans are in place to intervene in Nigeria's power sector as amongst all the DISCOs and GENCOs that have had agreements in Nigeria, none of the Japanese companies have been a technical partner. It might be important and imperative to use this opportunity to involve Japan to be in that mix.

Vincent Nmehielle invited the panelists to answer the questions.

John Mudany stated that pre-2013 the drop in connection cost was really driven from a policy point of view. The current Jubilee Party government came with a key focus on the energy sector under what is called *The Last Mile Project*. Previously, a customer would have to pay for the cost of transmission, distribution from the transformer or if it is within 600 meters, for transformer or the fuel cost from wherever the distribution line is being pulled. This could be anything because people could be 2 kilometers away or longer than that which increased the cost and it became completely unaffordable.

It was a two-pronged approach where the government discussed with many financiers. The African Development Bank was also part of the World Bank to bring the network closer.

The key focus was on the distribution network and anybody within 600 meters of a transformer got energy at a subsidized rate, which the government budgeted within the revenue budget to support that. The Kenya Power & Lighting Company, which is a distribution company, were to charge up to 15,000 shillings and the difference would then be made either through the support that came from the donors and the government.

Vincent Nmehielle invited Sumitomo to answer the question about ensuring to have more EPC contractors in their businesses in Africa.

Ken Kageyama stated that there are four points in order for them to expertise their activities in the power sector. One is the strong support from the government to the project based on the payment guarantee or some similar mechanism. Secondly, the legal framework should be

strengthened. Third is the existence of a regulator or strengthening the activity of the regulator in the field of power sector. The final one is better understanding between power-related business parties.

Vincent Nmehielle stated that the last two questions were devoted to both Sumitomo and the African Development Bank from the viewpoint of neglecting Nigeria in their investments where 200 million people are in need of energy and electrical power and somehow the two institutions just go to North Africa and do not think about coming to West Africa. The African Development Bank spends 12 billion in energy sector but neglects Nigeria's electricity requirements.

Ken Kageyama stated that one of Sumitomo's equity partners for the IPP business in Ghana is a Nigerian company. Sumitomo has been discussing about a potential project in Nigeria, which is a big potential market. There are two ways Sumitomo is pursuing this. One is the EPC. The other one is IPP which is being pursued at the moment. Sumitomo's long-term commitments are like for 20-25 years, which is prudent, but Sumitomo is on the lookout for any good opportunities in Nigeria which have been absent as of now.

Vincent Nmehielle questioned Marubeni if they still had not found an opportunity in Nigeria too.

Seishi Narita stated that Marubeni does a lot of EPC projects in Nigeria and have the number 1 EPC record in Nigeria. With regards to the IPP Project, Marubeni is a little bit cautious because the energy power sector in Nigeria does not work very well and in order to implement the IPP Project, Marubeni has to bring in the financing without which it cannot move forward. That is the hurdle that Marubeni needs to overcome.

Vincent Nmehielle invited African Development Bank to make comments.

Amadou Hott stated that the African Development Bank is not neglecting Nigeria as it has 200 million people. Nigeria is AfDB's biggest shareholder. The President of the AfDB is from Nigeria. Last year, AfDB gave \$1 billion budget support to Nigerian government for the power sector. AfDB has a PRG Program of \$140 million to provide guarantees to PPAs signed by NBET.

AfDB is coordinating with other donors, including the World Bank, the AFD and others, to resolve the power sector's liquidity crisis, which is one of the biggest challenges of the sector. DISCOs have sold power to customers but are not collecting enough money and whatever they collect is not taking into account the devaluation of the Naira. Due to this, the DISCOs cannot pay the IPPs and IPPs are unable to do more IPPs as they are not getting paid.

AfDB is trying to resolve the liquidity crisis, use the PRG for new IPPs and make sure to rapidly close on some IPPs because there are solar IPP projects in Nigeria, including from SkyPower. Nigeria has a gas project as well, including with Blackstone and some oil companies, but there is no movement forward because the PPA or the PCOA is a big issue. The government wants the IPP developers to take convertibility risk which they

cannot as they are getting paid in Naira and they need to convert Naira into US dollars as their investment is in US dollars.

AfDB has also been pushing for the government to accept the convertibility risk because Central Bank controls the FX. One cannot invest in dollars and get paid in Naira. Even if one is getting paid in Naira, they have the right to convert it into US dollars. If the US dollar is not available, then it becomes difficult. These issues need to be dealt with in working with the government. There is a lot of pressure on the government as well in this regards. Instructions have been given to the Ministry of Finance to move towards that direction but they are not there yet. However, deals needs to be closed.

AfDB has solar transactions and some IPPs but instead of trying to comprehensively resolve the whole sector in one go will take time. The government has a major role to play as the sector is stuck. Some projects need to be closed as solutions are being sought. The government needs to be conveyed that this is a big issue and needs to be resolved. There is nothing more to hide on this matter and if the government wants to resolve the power sector in Nigeria on the PPA negotiations, it needs to get their act together, particularly on the convertibility issue.

Vincent Nmehielle invited the African Development Bank to comment on the bank's policy towards fossil fuel in presence of a mix of energy sources.

Amadou Hott stated that the African Development Bank's energy policy remains unchanged. It is clear that AfDB does all technologies, except nuclear. From a broad perspective, it is easier to do coal in some countries than in other African countries. The AfDB will keep investing in coal but only on ultra-supercritical coal technology, which happened to also be provided by Japan and which is included in the Japan-Africa Energy Initiative that was signed for \$6 billion.

With that being said, the bank is at the same time accelerating the investment in renewable energy, including solar, wind, geothermal and so on. In East Africa, AfDB financed the government to set up the Kenya Geothermal Development Company from scratch. AfDB is investing in Tanzania in geothermal. In Morocco, the AfDB has invested in the major Noor Solar Project.

In Paris, Africa signed to pursue a low carbon emission growth path. It is a transition and is not going to happen immediately. It could take 4 years during which Africa needs to industrialize. Having base load with solar is too expensive. CSP is too expensive. It cannot be done with the PVs as it needs base load. Some countries have coal and they must use it. Mozambique and South Africa have coal but they will use it only with the ultra-supercritical technology that is provided by Japan and maybe a few other countries.

Vincent Nmehielle invited concluding comments from the panelists.

Ken Kageyama stated that Sumitomo, as one of the Japanese companies, would like to pursue the development, especially in the power field in Africa. In order to do so, both private and government-related companies should get together to pursue this development.

Seishi Narita stated that Marubeni is facing some difficulty in African countries, as each country varies in size, so the capacity of the power plant is not big and in this case ultra-supercritical technology does not fit very well.

Amadou Hott stated that the African Development Bank has a new vision, strategy and team to handle the area of energy in both public and private sector and is moving fast in this direction. AfDB is here to provide solutions and reacts much faster now than before because they want to execute fast. It is more than ever before open for business, particularly in the energy sector.

Mateus Magala responded to the salient question about 2030 and why. Africa, Mozambique in particular, faces some microeconomic shocks. Unless there is a mechanism to de-risk the shocks, the set targets may be not achievable. Once there was a shock, investments stopped in Mozambique. The agenda for universal energy cannot be attained if investment is stopped. Private sector is the best driver but is not a panacea as it is based on returns. Private sector will not invest money in an area where there is no framework guarantying return.

John Mudany stated that there are opportunities for IPP, PPP and EPC contractors to develop geothermal energy in Kenya with KenGen. The energy sector has got a lot of tax incentives like the investment tax allowance of 150%. Also, withholding tax from ODA or commercial lending on interest is exempt on energy sector.

Emad El Sewedy stated that there is no one size that fits all and challenges on ground need to be addressed through real partnerships. Service providers must be bound by performance and KPIs and not just delivery of projects.

Vincent Le Guennou stated his viewpoint from a financial perspective. Given the amount of stake and how much money has to be raised in order to close the gap of supply-demand in the power sector, the assumption is that this money will come from outside. It will be foreign currency denominated but will bill customers in local currency, so there needs to be access to local financial sectors who need the FIs' support. They need the African Development Bank's support to allow them to have the right maturity.

Vincent Nmehielle concluded the session by thanking the panelists.

He summed up the session by saying that for the universal access to electricity to become a reality for Africa in 2025, a number of issues need to be taken into account. One message that came out clearly is that the government needs to put together a proper legal and institutional framework to enable investors to come to Nigeria.

Despite Nigeria's enormous size and electricity needs, the frameworks need to be put in place to attract the necessary investments. The African Development Bank is willing and able to support African governments' desire to have energy and for them to be able to achieve the vision of access to electricity by 2025.