Wiebe K. Boer, CEO of All On, interview by This Day, a Nigerian daily, October 27, 2018.

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Dr. Wiebe Boer is the Chief Executive Officer of All On, an off-grid energy investment company. He has spent over 20 years living in Nigeria, having been born and raised by missionary parents in Jos, Plateau State. He tells JESUSEGUN ALAGBE about his experience in the off-grid energy sector and upbringing, among others

You run All On, an off-grid energy investment company. What has been your experience in this sector?

As you said, it's an off-grid energy investment company which is focused on the Nigerian market. We were set up and funded by Shell and basically, it was out of the recognition that the lack of energy access is the number one foundational development problem in Nigeria. If you look at any other social or economic sector in Nigeria, we perform relatively poorly and one of the main reasons responsible for that poor performance, whether it is education or health, whether it is productivity or competitiveness, is related to lack of power, because power has an impact on every society. Recognising this fact, Shell decided to set up an investment fund that can invest in companies that are delivering services that are addressing the power gap and that can help to scale up the industry. Shell hired me a year ago and the experience has been fantastic, especially when you are addressing something that every Nigerian feels is a problem. It means there's always going to be a lot of support for what you're doing. I think what's also exciting is that in just a year that I've been here, the government has put in place a much improved regulatory environment, which includes the mini-grid regulations and the eligible customer regulation. A lot of efforts have been put in place to basically have the enabling environment for the sector to take off. I think about two years ago, everything in Nigeria was focused on grid power, that is, the big generation companies, the transmission companies, the big distribution companies and it was almost as if there was no other option. But now they've put in place a regulation that is more than one approach and that's the off-grid distribution. Another exciting thing is the number of business models, innovations and technologies that are either in the Nigerian market already or are coming in, and I think there are many Nigerian companies that are really innovating in this space and are working hard to address the problems. So I think the government's support and the existence of exciting Nigerian companies and innovations are helping. The problem is so massive and every little effort helps. Every additional connection, whether to a household or a small and medium-scale enterprise, changes lives.

The off-grid power sector is still at a developing stage. What are the challenges there right now?

There are always challenges. First of all, All On is a start-up and as a start-up, you will try to fine-tune your processes, which can be challenging. Having said that, the major challenge is the energy gap in Nigeria. About 90 million people lack access to power; they have no access to grid power at all and another 30 million have less than four hours of power every day from the grid. So, about 120 million people are affected, and the energy gap is around 175,000 megawatts, so this is a massive problem. So where do we start? The challenge is knowing where to start. So as an energy impact investor, we have to know what kind of companies to invest in first, that is, those ones that can scale up and grow fast and fill in the energy gap. Another challenge is that there are a lot of pretty interesting businesses in this space and so, knowing which to invest in could be a challenge. In essence, the challenge in this space is not the lack of innovation or investment opportunities or government support; they are all in place.

What specifically do you look for in a start-up you want to invest in?

We invest in both angel and start-up businesses, but also in companies that have been operating between three and four years and are ready to take the next step and grow. However, the most important thing we always look out for is the team. Who is behind the start-up? Who are the entrepreneurs? What is their vision and what is their ability

to execute on that vision? To me, that's always the most important thing. The second thing to look out for is their approach to the technology they're using. Is it unique or is it that they have a better way to scale up or have a better understanding of the Nigerian market? What is it that gives them an edge using their business model? Do they understand who their customer is and how to go after them? You know we have some early entrepreneurs with great ideas but we don't know how to go after their customers. So, the factors we look out for are the team, business model and clarity of what it is the team is trying to do.

How do you scout around for start-ups to invest in?

The industry is not very big, and as an investment company which focuses only on the off-grid market and only on the Nigerian market, any business that is operating in this space in Nigeria finds us. Because of the small size of the sector, all the players know one another and refer one another to us. It's basically by word-of-mouth and we also find some through the social media. Sometimes, we find someone who writes a lot on the projects they're working on and we follow up on them. There's one company in particular called Auxano; they assemble solar panels. I found them on Twitter because they always write about what they're doing and now we're in an advanced talk with them. We also throw up a broad challenge and see what the market brings. We did one with Co-Creation Hub for ideation stage businesses, which are basically businesses that are just ideas and the next step is to take that idea and build a business around it and make it to start running. This happened earlier this year and there were about 250 applications from across the country. Some of them were non-viable while some were in the wrong sector, but we also saw some interesting ones. Another one we did was with the United States African Development Foundation, which is a US government agency. We got around 200 applications. About 50 were pretty interesting and investable. So, the businesses are out there and through the approaches I've mentioned, we have been able to find those we can work with.

So far, how many Nigerian businesses have you invested in?

We have invested in three companies but there are more that are soon to be invested in. All the papers have been signed; it's just to disburse the funds.

Though lack of access to power is a general problem in Nigeria, but which part of the country do you seem to focus on?

Because our donor investor is Shell, we seem to focus more on the Niger Delta and so if there is a business that we're looking at and their business model and technology have no interest in operating in the Niger Delta, we won't invest. However, if the company is not from Niger Delta but is willing to go there, then we can also invest in such. Note that it does not mean the company must leave the region where it was operating before. By the way, very soon, our plans will extend beyond the Niger Delta.

What expectations do you have from companies you eventually invest in?

Because we're an impact investor, we have a target both in terms of financial return and social impact. For the social impact, we are looking at how many connections a company can provide – for instance, maybe powering 5,000 or 10,000 households. To us, this is very important. In terms of economic returns, we don't expect market rate returns because we are impact investors and we know the sector is a very risky one. A typical investor would not likely invest in this sector. For example, a commercial bank in Nigeria will demand 26 per cent interest rate on a loan, but in our case it can be between eight and 15 per cent, depending on the structure of the business. For equity investment, it's a similar return; let's say between 10 and 15 per cent. So it's not the typical product or venture capitalist investment which expects between 30 and 40 per cent return. We want a healthy financial return, but we also cherish a healthy social impact.

What are the biggest alternatives to on-grid power to Nigerians right now?

The two biggest opportunities right now are the solar home systems. It's a retail consumer product and as long as they can get to the right price point, I think they will

take over Nigeria. At this point in the entire market, there are only about 100,000 solar power systems deployed throughout Nigeria, which is a tiny fraction of the market potential. It's a promising and big power alternative. The other alternative is minigrid, which is not yet common. Maybe 20 are in Nigeria. The mini-grids can generate up to 200 kilowatts and can serve an entire community, about 200 households and SMEs. You can provide reliable power using this and there have been stories of communities that were completely off-grid but have now been transformed through the mini-grids. Because there is now power, education is improving, businesses are booming and so on. If this can be replicated 10,000 times, the country will change because the truth is that those communities with mini-grids have better power supply than those of us connected to the grid. It's an interesting model. Another alternative that is interesting and which can be done in the Niger Delta is to generate abundant gas supply, then we can do gas power mini-grids, which is cheaper than solar power system. This also can transform the power landscape.

You've spent over 20 years in Nigeria. What do you think is wrong with the power system?

This is a question that could take a whole day to answer, but let's say what is wrong with the system as of today is that the typical customer is not getting reliable power but he's getting billed for a service they have not adequately received and are therefore frustrated. So, because of this, they don't pay. In fact, only about 15 per cent of power consumers pay, which is lower than what the Discos are investing to provide power. Even when the customers pay, the Discos are still making a loss. Because of this, the Discos don't also pay the Transmission Company of Nigeria for the power they receive, and due to this, TCN can't pay the Gencos, and because of this, the Gencos, most of whom are powered by gas, can't also pay the gas companies, and so debts start accumulating at each phase, which means no investor is willing to show up. TCN is still government-owned, so are they really going to put up the billions of dollars needed to upgrade the sector? And in any case, is the national grid even relevant at this age, because in other parts of the world, they have moved from there to the distributed grids. The Discos aren't bankable because they're not getting paid, so

they owe a huge debt, hence they can't invest in what is needed to improve their relationship with customers. So, at almost every point in the power chain, there is an issue – either the leakage of power or money – and until it's addressed, it's heading down to a point when almost everything will collapse. And so, the hope is that the small scale distributed power producers should be developed enough so that if the grid collapses, they can pick up the pieces. But with the regulation in place now, with eligible customers, a Genco that is generating at full capacity but is not getting paid can actually choose to start distributing directly to the end users that were not properly served by the Discos. If that's what's happening, together with the small scale distributed power producers, I think in the next three or four years, we will see a very different power sector in Nigeria than we do now. I also think if the Discos are ready to start investing in new technologies that are needed and in customer engagement, they may survive. But if they don't, they may go the way of NITEL (Nigerian Telecommunications Limited).

The United Nations recently predicted that Nigeria's population would double by 2050. Meanwhile the energy production has remained stagnant. Do you think we can meet up with the energy demand of the future?

That's why we have to embrace the solar off-grid distributed approach, where communities and local governments are basically generating and distributing their power. Everyone can put a solar panel on their household and even connect their neighbour. This is what is done in Germany and other developed countries across the world. All you see there are mini-grids and local Independent Power Projects; these are what can fill in the gap, and thankfully there is a willingness to pay by Nigerians. They have already spent quite some money on candles, kerosene, rechargeable lamps and generators. The estimate is that they spend between \$10bn and \$12bn a year on those power sources, so if we can provide the right business models, people can start to enjoy power reliably. So I think everyone should get excited about this.

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You were born and raised by Christian missionary parents in Jos, Plateau State. <u>Tell us about your upbringing...</u>

I was born in the 70s in Jos, but I lived in Taraba State. But at age five, my family moved to Jos again.

What was Jos like then?

In the 80s and 90s, Jos was an unbelievable remarkable place. I can't imagine any better place to grow up in the world. If you talk to any Nigerian who lived there or who knew someone who lived there during that era, they would tell you Jos was the best place to live on earth. It was incredibly beautiful and home to everybody, regardless of where you were from in Nigeria or Africa or the world. It didn't matter whether you were a Christian or Muslim. We would go to the mosque with our Muslim friends and they too would go to church with us. There was absolutely no conflict; everyone got along. Because of the weather and the environment, you could spend your whole day outdoors, hiking and climbing. When I was a kid, there were people who used to hunt lions around the place. It was a safe and lovely place to grow up and as children, we were pretty free.

Do your parents still live in Jos?

No, they stayed in Nigeria for 30 years and then they retired in 1996. Now they are in Canada.

Are you their only child still living in Nigeria?

No, my elder sister lives here too, as well as my wife and children. When my parents came here in 1966, they didn't have any child and so they adopted a Nigerian girl. Her name is Lydia. She is married to a pastor and they live in Abuja. She has three sons who are also in Nigeria. You may have heard of them: MI Abaga, Jason Abaga, and Jesse Jagz.

Your favourite Nigerian artiste would probably be between MI and Jesse Jagz then...

My favourite Nigerian artiste is Jesse Jagz, followed by MI.

You got a PhD in African History at Yale University, US. Why did you have an interest in African History?

I think part of the reasons was that I grew up here. I've spent all my life here and I just really wanted to understand the continent where I grew up better. So it's just a matter of personal interest; it's passion. When you start talking about the history of Nigeria and Africa, I'm extremely excited, so it's out of my love for the subject that I got a PhD in it.

Perhaps this love was also the one that prompted you to recently write a book on the history of football in Nigeria

It's actually the topic of my doctoral dissertation and what happened was that when I started in graduate school, I wanted to write on a topic that was meaningful and important. There were too many people writing on really obscure topics that didn't really matter. We used to joke about people writing on topics like, 'Naval piercing in the Congo Basin in June 1860.' I mean that's an obscure topic and I didn't want to waste my time doing that. So for the first two years, while I was at graduate school and before I had to finally pick my topic, my thought was: what was one thing that Nigerians have that was positive, national, unifying and historical? The only answer I got regardless of age, gender, religion, status or tribe was football. That was the only answer. I said that was okay and interesting, because I also love football. I made a case to my academic advisors that I wanted to trace the story of how this completely foreign cultural practice of football was introduced to Nigeria and how developed over time it had become. So that was what my doctoral dissertation was about, and that was about 15 years ago. I had no intention to publish the book because I didn't stay in the academia. However, I kept feeling I needed to get the story out because I did the research for a reason. And because it is historical, it didn't become out-of-date.

So about two years ago, I met a book publisher in Ibadan, who liked the idea. He looked at the manuscript and said it was great but noted that it was too lengthy and academic, so he brought me an editor, who helped me condense it into something publishable.

How acceptable has the book been by Nigerians?

No one is going to become rich publishing books for Nigerians, but it's a topic that everybody relates to and so it's something that has been well received. But one of the interesting things you see on the social media is that some people ask why a 'foreigner' is writing about their history. Lots of people assume a guy that looks like me wasn't born and raised here. And that's the only criticism it has got. But at the end of the day, it's not about the history of football but that of Nigeria that tells how an identity was created for national unity.

Talking about football in Nigeria, do you think we are where we are supposed to be today?

We are not there yet considering the kind of predictions that were made about the future of football in the 1940s. It's not just football, we are way behind where we are supposed to be in every sport and the reason is because in those days when we were in secondary school, there were different competitions, but all of that is gone today. If we don't have a structure like that in place in schools which develop talents and bring them out, we can't go anywhere. Nigeria should by now have top global players in track and field, rugby, volleyball, basketball, wrestling, boxing and several other sports. We have top talents that should be sweeping awards at the Olympics. That's what Jamaica did in track and field. If Jamaica could do that with just a population of three million people that are 40 per cent Nigerians, how much more Nigeria!

What's your favourite Nigerian meal?

It's okra soup. There's a kind that is prepared in Plateau State that is the best. I also like Edikaikong.

Do you attend 'owambes' and buy 'aso ebis'?

Yes, sometimes.

Is your wife from Nigeria?

No, she's from Trinidad and Tobago.

Does she cook Nigerian meals for you?

She cooks Trinidadian and Tobagonian foods for me. I can actually cook Nigerian foods.

Do you also plan going to the missionary fields like your parents in the future?

I think I have a different mission now. The way I see it is that my parents brought the light of the Gospel, while I'm also bringing the light of electricity.

How do you relax?

There's no time to relax. I work a lot. However, I play drums in the church. I also read and play tennis.