



The Nigerian Society of Engineers

PORT HARCOURT BRANCH

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AN INTERVIEW WITH ENGR. OTIS ANYAEJI, FNSE, MD/CHAIRMAN OTIS ENGINEERING LTD, ON NATIONAL ECONOMIC EMPOWERMENT AND DEVELOPMENT STRATEGIES (NEEDS) - ENGINEERING CHALLENGES

E-Newsletter: Good morning sir. We will appreciate if you tell us about yourself, your experience, the challenges you have faced in engineering and your contributions to the profession.

Engr. Otis: My name is Engr. Otis Anyaeji. I graduated in 1976 from the department of Mechanical Engineering in the University of Nigeria. My NYSC primary assignment was with the Nigerian Railway at Ebute Metta. In 1977 I concluded my service year and then joined a consulting firm; Alcon Associates, Mechanical and Electrical Engineering Consulting Firm also based in Ebute Metta. I was with them for about six months before I was posted to Kaduna to open an office in Kaduna. After awhile with Alcon Associate, I joined the Peugeot Automobile Ltd, they were then starting their Nationalization process and I was the first Nigerian engineer employed in the Production department. I worked with Peugeot Automobile from 1978 June to January 1980. Thereafter I went to the Ports Authority as a Senior Mechanical Engineer. I was there very briefly because almost as soon as I got employment with the Ports Authority, I got an appointment with the Nigerian National Petroleum Corporation (NNPC). Here I was given the assignment of the site representative, for the Petrochemical projects in Warri. And I was the site representative of the project from 1980 to 1984, when I became the Lead project engineer for the carbon black plant component of that project. In 1987, I was on the conclusion of that project, when we have achieved mechanical completion; I withdrew my services and established Otis Consult Limited, which is now Otis Engineering Limited. As the founder, Chief Executive Officer to Otis Consulting Firm, I have consulted on a wide range of projects virtually all the basic industrial projects from Petroleum to Steel, Gas, Electric Power, Port plants, Nitrogenous fertilizer, Phosphate fertilizer, Automotive plants etc. Presently my firm is working as a joint design and management consultant on National integrated Power Project. This is a Federal Government intervention project. We have achieved about 4000 MW in generation and built about 3000 kilometers of electric lines and another 5000 km of distribution lines, which require 52000 transformers and also about 152 km of gas line. So my firm and German firm are responsible for managing the project after having to go through the basic engineering.



Engr. Otis Anyaeji

E-Newsletters: Thank you very much. It is quite a lot of experience. As a private practitioner, what are the challenges that would help others, especially the young engineers coming up?

Engr. Otis: Well the challenges we do have are numerous. There are systems which have not really been structured to support local professional engineering firms. Other professions might also have the same complain but particularly in engineering, attempts to get other engineers involved in various projects that are going on in the country have been a problem. So you find that one needs more than the normal level of aggressiveness to be able to get involved in activities that are going on within their own country. I will give you an example. In the oil industry, while I was there, there was a kind of nonchalance towards private practitioners in engineering. That was the late 1970s and early 1980s. Even up till now, I don't think it has changed. For some years now we had heard talks about our local content development and a lot of written paper works trying to theorize on what local content could be achieved and how local content should be. But my observation is that all that is negative effort because we do not need all these documentations to involve Nigerians in activities that are carried out in their country, and so all that is needed is a matter of policy. If the government

adopts a policy that says 'any job that is coming up in Nigeria not only in engineering but in all fields, that Nigerians must participate in it' and then go on religiously to adhere it. The policy should make provisions where jobs should **NOT** be given to any foreign company that does not want to involve Nigerians in their work. If that is done, by the stroke of the pen you can just see our engineers involved in our investments. Setting example is the project that we are presently working on, NIPP. At the commencement of the project, the government or the Ministry of Power and Steel, I think maybe under the directive of the President decided that Nigerians must be involved in all the contracts at least to the extent of about 25%. And so every company that was coming in, the project was structured so that it must have a local partner. Not just coming in and employing people, they must have a local partner who will participate in the job to at least about 25%. And you do not need any law to do that. That was what the directive carried out by the RSP and because of that they now have about eighty-three Nigerian companies involve in the project. In fact the distribution field is left for Nigerians. Of course I know that the President Obasanjo's administration came out with a white paper on Strategies for engineering development. In fact they actually said that jobs worth about 500 million naira and below should be reserved specifically for Nigerians. But that statement has just remained in the desert of that paper. Even the Nigerian Society of Engineers has not moved to actualize that and get it realized for the benefit of Nigerians and it is one of the things that we have been trying to see that the society takes up. This will really help to improve a lot for not only engineers, but other professions so that they benefit from the developmental works that are going on in their own country.

E-Newsletter: Thank you. From what you've said it means that the National Economic Empowerment and Development Strategies are working. Do you think that there is also the duty and responsibility of Nigerian Society of Engineers to make sure that these laws are implemented? Because left for the ministry alone, we don't think much can be achieved.

Engr. Otis: Well the problem with the Nigerian Society of Engineers is the way it was formed. It was formed as a grouping of all engineers because in 1958 there weren't many engineers let alone engineers of each discipline. Perhaps the best thing to do at that time was to put every body together and have a society but since then, we have grown beyond what we were in 1958 and the emphasis have shifted up to the discipline. Still getting them under an umbrella of NSE but trying to empower them to really go out and conquer their own sectors in the economy because one monolithic body like the Nigerian Society of Engineers can not effectively manage all the sectors. Politics should be separated from the engineering profession. I want to suggest at this point that the various institutions/ disciplines and specialization should go into the field and try to man the various sectors. If that is done, then we should be able to find out what is going on at any time. But if you leave it to the Nigerian Society of Engineers as a group to do, where are they going to start and where are they going to stop? It is not possible for example for the President of Nigerian Society of Engineers to know what is happening everywhere. It would be humanly impossible for him. But if he is using chairmen of the various institutions he will effectively cover everywhere because they will feed him back with reports which he will use at the political level to seek for improvement, benefits and increase opportunities for all engineers.

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National Economic Empowerment And Development Strategies

E-Newsletter: Some time you were the Executive Secretary of the Nigerian Society of Engineers, has there been any forum where this matter was discussed so that at the management level, some of our problems could be solved?

Engr. Otis: First of all I wasn't an Executive Secretary, I was the Secretary General and I had an Executive Secretary that was working with me on day to day basis at the secretariat. I was elected. The secretary general office is an elective office while the executive secretary office was paid employee office but on the question, I had made a suggestion on this. When I was secretary general, my responsibility was a bit different from what we are trying to consolidate and I must say, I came in as secretary general at a point where we were about to lose the National Engineering Centre in Lagos to the banks. So the biggest issues facing the then president, Engr. Inuwa, I and other members of executive was how to retain ownership of the centre. We were concerned about the image of the Engineer and we knew that it was just a question of time that the division when they are well structured will really take over the executive running of the society. But I have worked on this issue and they actually bring to the Annual General Meeting in Ibadan. At the meeting eight motions that dealt with this issue on how to professionalize the society and how to restructure the society so that we can give technical leadership to the divisions were raised. When that has been done, NSE will begin to sponsor more like Nigeria Federation of Engineering Organization similar to the World Federation of Engineering Organization. So that it will be more like an association of these institutions. Then you also try drawing your leadership of the society from the institution. It wasn't quite a popular mode because a lot of people felt that their political career has been threatened so the fight against it and it was not taken at that Annual General Meeting. It was presented again at the Warri Annual General Meeting and still again was repositioned not on the issue been that because they refuse to take on the issue, even bringing up the thing at all. So that was the situation we had and we are reaping out of it. You will see this kind of problems that are coming up. One happened about two weeks ago in the House of Representatives where the membership of NSE in the Board of the bureau for public assembly was cancelled and NSE was replaced by the Quantity Surveyor in the house. The senate hasn't done the same thing yet but the house has been considering some amendments with the people on that same bill. The board membership was one of the amendments but they jumped into it and then they removed NSE and put Quantity Surveyor. If we had projected ourselves in such a way that it is understood that we have an Institute of Appraisals and Cost Engineering then it will be more evident to people looking at us than engineers also do the same thing that quantity surveyors do. That's just one example, there are others? And if each time we go to a place and they are speaking about Nigerian Society of Engineers, people are bound to be jealous. People are bound to feel that we are getting more than we deserve without understanding our character of going along the lines of this specialization/discipline. If something that has to do with highways, they have an institution of highway engineer or Civil Engineering that you put in there, nobody is going to quarrel with you. If you go to the one that is electrical and put the institution of electrical engineers, a division of NSE, everybody will understand. They can't say that electrical engineers shouldn't be there. But if you just put Nigerian Society of Engineer, they will just be going around talking that NSE everywhere and is taking everything and it works to our disadvantage.

E-Newsletter: One problem we are facing in this country is the area of energy and water resources. And they are one of the 7th point agenda of Federal Government Administration. You are now involved in power projects in this country, what do you perceive in future, will these projects and management of our energy sector reduce the problems of energy in this country?

Engr. Otis: Well to reduce the problem of energy in the country will mean working at it. You have to be continuously working at it not talking at it. Because what has been going on for a long time, we didn't even talk about nor did anything about it and from about 1999-2000 there was no new power station built in PHCN system. Then in the first four years of Obasanjo, he built one power station at Aba and then the privatization style of the time dissuaded the government from making investment in the power sector and also other productive sector.

(NEEDS) - Engineering Challenges



Engr. Ujile & Engr. Otis

You can see that the first four years of Obasanjo was lost. No initiative in the power sector. So he realized from 2003 that mistake has been made and eventually started building power stations in 2004. This was put in place in 2005. If you started building power station in 2005, you needed about three years for it to bear fruits. But after two years, the new legislators started spacing it. The government themselves did not continue with the investment and trying to straighten out the funding. They want to get the funding through the national and state assemblies. That also has led to some gaps in funding which has reduced the speed we would have gained in implementing these projects that are already in the pipeline. But again, we should also be conscious about the optimism we have on the effect of the out going power project on the power situation in the country because what we are expecting from NIPP maybe if we get about 4000 MW and add to about 3000 MW that's about 7000 MW. If you rehabilitate all the power stations and maybe get another 2000 MW on top of that, that's about 9000 MW. But the demand as for today is clearly more than 12,000 MW. So definitely will not be enough and if your demand is about 12000 MW, for you to have 12000 MW all the times, you should have about 18000 MW operating. For you to be sure that you have 12,000 MW all the time, we have still to do other things to move in that direction. And then if you look at vision 2020, what that simply means if we want to be top twenty economies, there are many things to consider in terms of electric power and it should mean that by that 2020, we should be giving at least 200,000 MW. If you need 200,000 MW, your economy should be bobbling at that level for you to make the gross national income that will come within the top twenty and for you to have 200,000 MW all the time you should be having in place about 300,000 MW. So you can imagine the level of work that needs to be done. You thing that NIPP is doing, am telling you, we are only going to get 4000 out of it and we are talking about an economy that should be consuming about 200,000 MW and having installed 300,000 MW, that how you can make it. These are the things that we need to sensitize particularly the leadership, so that they could be aware and continue to work on it because these things are not things you do today and then leave out and come back in ten years time. It is every day, every year till the end of time. We have to keep making these investments in new capacity, additional capacity, rehabilitation and maintenance of what we have and then in diversification of available resources. Presently we have natural gas, we need to diversity that, we need to go into coal, solar although in solar there is a limit to what you can get but the basic areas we need to go into would be coal, some hydro but there is limit to hydro also. If you harness all the waters we have in Nigeria, you probably will not get more than 15,000 MW. So it is coal, gas, in fact liquid if we want to move forward, nuclear should give us more than what we get from hydro-power

E-Newsletter: Thank you very much it has been a very interesting period listening to you. Before we draw the curtains what advice do you have for the practicing engineers out there?

Engr. Otis: The practicing engineers should continue to update themselves, they have to acquire knowledge in order to know what is happening, and they have to be aggressive and pro-active. They have also to realize the due process system that is in place. It's opened to up a lot of challenges to people that ordinarily wouldn't be there. What this means is that the starting point of a project, you have to advertise it. So people are invited to come and bid. Anybody can go to bid if you meet some of the basic qualifications. Registrations in companies should not be taken as a condition for bidding because if you do that you will finish all your money trying to register and all that. There are opportunities out there but our people have to grab it, then try to contest and compete.

E-Newsletter: Once again thank you very much for the audience given to us.



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