



HOUSE OF REPRESENTATIVES FEDERAL REPUBLIC OF NIGERIA

VOTES AND PROCEEDINGS

Thursday, 1 March, 2018

1. The House met at 11.14 a.m. Mr Speaker read the Prayers.
2. **Votes and Proceedings**
Mr Speaker announced that he had examined and approved the *Votes and Proceedings* of Wednesday, 28 February, 2018.

The Votes and Proceedings was adopted by unanimous consent.

3. **Announcement**

Visitors in the Gallery:

Mr Speaker recognised the presence of the following visitors in the Gallery:

- (i) Staff and Students of *Angelic Academy*, Kubwa, Abuja;
- (ii) Staff and Students of *Unique Mission Nursery and Primary School*, Dutse Alhaji, Abuja;
- (iii) Staff and Students of *Premier International School*, Wuse II, Abuja;
- (iv) Staff and Students of *Goodness Academy*, New Karu, Nasarawa State;
- (v) Staff and Students of *Esteem International School*, Lokogoma Estate, Abuja;

4. **Debate on Steel Sector Development in Nigeria**

Motion made and Question proposed, "That the House do commence Sectoral Debate on the Iron and Steel Sector of the Nigerian economy, pursuant to Order Sixteen, Rule 3 of the Standing Orders of the House of Representatives (*Hon. Femi Gbajabiamila — House Leader*).

Agreed to.

5. **Speaker's Introductory Remarks**

The Hon. Speaker addressed the House as follows:

PROTOCOLS:

Dear Honourable Colleagues, as part of our Legislative Agenda, we committed ourselves to Sectoral Debates on major sectors of our economy, with a view to interacting with senior members

of the Executive branch to help proffer legislative and policy solutions to existing national challenges. To this end, we have so far undertaken several sessions in the past which featured a number of Honourable Ministers.

2. *On 12th February, 2018, I visited the Ajaokuta Steel Complex in company of members of the House Committee on Steel. I dare say that the visit was an eye opener. The plant has an installed capacity of 1.3 million tons P/A with provision to increase capacity to 2.6 million tons and further to 5.2 million tons P/A. The first phase of the complex is 98% completed with 40 of the 43 units already installed.*

3. *An investment of over \$5.1 billion has gone into the complex. The complex has a completed internal standard gauge rail track of approximately 68kms. Out of 10,000 housing units targeted in the first phase, about 3,500 units are completed and have been occupied since the 1980s, while the rest were abandoned at various stages of completion. The complex has two power plants with total installed capacity of 110MW of electricity which is more than enough to power the entire complex, the whole of Kogi and Edo States. The complex boasts of first class internal road networks. It is also linked to Warri by Standard gauge rail line and gas pipeline.*

4. *When completed, the Ajaokuta Steel plant has capacity to generate about \$1.7 billion P/A, employ over 10,000 Engineers and technicians; employ over 10,000 other personnel; lead to the creation of over 2 million indirect jobs; increase Nigeria's export earnings by over 1 billion USD P/A and save over \$15 billion USD worth of steel products imported into Nigeria annually if statistics from the NBS is anything to go by. Additionally, the plant will produce millions of metric tons of cement and fertilizer P/A.*

5. *I want you to imagine what would be the outcome today if we had completed this plant 34 years ago as originally planned. Also imagine if there is any nation on this earth that will sink more than \$5.1 billion of its hard earned money on any project and walk away from it when it is 98% completed. Could this be national sabotage or have we been bewitched by some powerful sorcerers? Just imagine how much it will cost if we were to undertake such a project afresh, either now or in the foreseeable future.*

6. *To our collective shame, the present state of Ajaokuta steel complex is more of an expressive metaphor of our ineptitude and bad governance over the years.*

7. *We have been told that Government does not have the funds to complete the remaining 2% of the plant. Nothing can be further from this position as Government does not need liquid cash to complete the plant and put it to work. All Government needs to complete the plant is, leadership. Of course there is no leadership without ideas. Money in turn is the fruit of ideas. In other words, poverty is not lack of money but lack of productive ideas. That is why we have invited key Government officials and experts to help us generate the right ideas that will produce the money to be deployed to complete this plant and end this national embarrassment. If we do this, we will be accelerating our nation's journey into the future and into the club of comity of industrialised nations. This is the rationale of today's Sectoral Debate on the Steel Sector.*

8. *Let me now yield the floor to the experts to advise us on the way forward. I wish us all an informed and fruitful deliberations.*

9. *Thank you.*

Mr Speaker invited the Minister of Mines and Steel to address the House.

The Minister was absent.

6. Privilege (Order Six, Rule 1)

Mr Speaker informed Members that the House had written a letter signed by him, dated 16th February, 2018, inviting the Hon. Minister of Mines and Steel Development, to the Sectoral Debate on the Iron and Steel sector of the Nigerian economy. On Tuesday, 27 February, 2018, he received a letter signed by the Permanent Secretary of the Ministry, informing the House that, for some reasons, the Minister and the Minister of State would not be able to attend the sectoral debate. Subsequently, the House wrote another letter to the Hon. Minister, reiterating the need for one of the Ministers to be present at the debate due to the critical and strategic place of Iron and Steel in Nigeria's industrial development. The Hon. Speaker regretted that neither the Ministers nor their representatives were present in the House for the debate.

The House viewed the action of the Ministers as a deliberate design to undermine the House of Representatives and the institution of the legislature in the country, and therefore a breach of the privilege of the House.

In view of this development, the House Leader, Hon. Femi Gbajabiamila, sought leave of the House to move a motion on the matter.

Leave granted.

Motion made and Question proposed, "That the House do resolve to:

- (i) Set up an *Ad-hoc* Committee to investigate the reason for the failure of the Ajaokuta Steel Company to commence operation fully since inception and report back as soon as possible; and
- (ii) pass a Vote of No Confidence on the Minister of Mines and Steel Development, Kayode Fayemi, and the Minister of State, Abubakar Bawa Bwari, for their disregard for the House of Representatives and boycott of the sectoral debate on the Iron and Steel sector" (*Hon. Femi Gbajabiamila — House Leader*).

Agreed to.

(HR. 78/2018).

7. Presentations by Invited Speakers

On the invitation of Mr Speaker, the following persons submitted written presentations:

- (i) **Engr Anthony Madagua:**

The Right Hon. Yakubu Dogara, Honourable Speaker House of Representatives, Federal Republic of Nigeria.

Honourable Members House of Representatives, Federal Republic of Nigeria.

I want to thank the Honourable Speaker, the leadership of the House and the entire Honourable Members for this privilege to address you on the matters of steel in general and Ajaokuta Steel Plant in particular.

I will start this address by reminding us of an extract from vision 2020 economic blueprint: Nigeria shall produce 12.2 mt/yr of steel in the year 2020 out of which Ajaokuta Steel Company is to produce 5.2 mt/yr Delta Steel Company to produce 2mt/yr and the remaining by private sector if Nigeria is to join the league of 20 industrialized nations by 2020.

The desire to develop the Nigerian steel industry had always been there as no nation had ever transformed into industrialized and modern societies without the acquisition of heavy industries, primarily iron and steel technology. Steel is the bedrock of technology, and technology (its development and mastery) has become the hallmark of nationhood in our contemporary world. Steel is technology, steel is politics, and steel is power. The nation that rightly and presently constitute G-20 have only one common index and that is they are all steel producing nations.

Honorable Speaker, Honourable Members, the Nigerian Steel tragic story and that of Ajaokuta in particular is best summarized by a paper presented by a colleague "A tale of Four Steel Plants" in one of our conferences.

The four Steel plants are Visag Steel Company, India and Ajaokuta Steel Company, Nigeria on one hand. Both steel plants are of the same technology, were founded in early 70s with contract to establish them awarded in early 80s to same Company - Tiajpromexport (TPE) of former USSR. Both plants suffered time and cost overruns. With commitment and political will Visag was eventually completed and commissioned in 1992 (after about 20years) with initial capacity of 3.2mt/yr and has attained a current production capacity of about 6.3mt/yr of crude iron, while crude iron/steel capacity of ASCO is still not completed (after about 35years and still counting). In 2014 Visag (owned by Indian Government) with direct employment figure of 18,371 as at March 2014 made ₦1.9 billion profit after tax. Visag recently signed MOU for production/supply of transmission lines towers and tower parts in India, these are part of the steel products we presently import into the country that account for over USD 4 billion annually.

The other hand of the Tale of Four Steel Plants constitute Saudi Iron and Steel Company (Hadeed) and Delta Steel Company Ovwian Aladja. Both plants are of the same technology, constructed on turnkey basis by the same German-Austrian Consortium and both commissioned in early 80s. Hadeed started with 800,000mt/yr and has currently increased to 5.5mt/yr. DSC could not go beyond 250,000mt/yr when it was eventually run aground in 2011. Hadeed is one of the companies operated by Saudi Basic Industries Corporation (SABIC) and is 70% owned by Saudi Government. In 2014 SABIC with employment figure of 40,000 as at end of 2014 made ₦1.2trillion profit after tax. This means that steel can be run as strategic enterprise. The success story of steel industry in many industrialized nation did not happen without serious efforts and commitment from the various government. The tenacity of these governments made all the difference. For example, during the Korean Miracle period, the government of South Korea identified iron and steel, petrochemical, non-ferrous industries as the backbone of a modern industrial economy, and continued "to undertake risks that cautious entrepreneurs would tend to avoid by providing heavy capital investment in these industries". Today South Korea boasts of six out of the first ten largest-shipbuilding corporations in the World. In Saudi Arabia, the Public Investment Fund which was established by the government in 1971 "to provide financing support in productive projects which are of commercial nature and are strategically significant for the development of the national economy and cannot be implemented by the private sector alone either because of lack of insufficient experience or adequate capital resources or both".

Having said all this, what is the way forward for the Ajaokuta Steel Plant and indeed our steel industry?

The two integrated steel plants at Ajaokuta, Delta and the iron ore mining company Itakpe constitute the nation's steel base and still remain so. The completion of Ajaokuta is put at 98% and this percentage completion refers to the "plant proper" and does not take cognizance of completion of supporting infrastructure required to effectively and efficiently operate Ajaokuta.

Therefore in looking forward to operationalise Ajaokuta, four areas of consideration come into focus:

- *Completion of the balance 2%*
- *Completion of supporting infrastructure which includes internal and external facilities such as rail link to Jakura Limestone deposit, Ostara dolomite deposit, supply of rolling stock and rail tracks, etc.*

- Working capital for initial one year operation for imported coke, ferro alloys etc.
- Availability and readiness for National Iron Mining Company Itakpe to supply about 2.2 million tons per year of iron ore.

The estimated cost to realize the first three areas is put at about USD1.4 billion to commission the first phase of the Ajaokuta Plant of 1.3 million tons of liquid steel per year. A full disclosure of these facts will inform and guide the decisions on how best to begin to realize the Ajaokuta project, and make it run as a strategic enterprise just like pasco, Haddad, Bhilai, Vizag, etc. What are the options open to us?

1. Completion under Sole Ownership of the Federal Government

While I appreciate the huge cost of completing the Ajaokuta Steel project vis-a-vis the development needs of other strategic projects, it is important to bring to fore the paradigm shift in major state-owned projects for states to partly divest in such projects and allow for private sector participation targeted towards better efficiency.

Secondly it is worthy to raise a note of caution that even if the government completes the plant under its sole ownership, it has to bring in the expertise to operate and maintain the plant as we currently lack this expertise locally. It therefore makes a business sense to bring in such expertise at this point of the project in whatever form that will be found most suitable and workable. Completion under sole ownership is therefore not recommended.

2. Completion under a Joint Venture Arrangement

A joint venture arrangement such as obtains in the oil industry would have been plausible even though there are still a lot of challenges in operating those JVs which we are all aware of. The Ajaokuta Steel Plant and indeed the steel industry do not attract such interest. Government bureaucracy going by the happenings even in the JVs in the oil sector may hinder timely completion of the ASP under a JV arrangement.

3. Completion Under Concession to Core Investor/ Steel Operator.

A "genuine" concession arrangement for the completion of ASP is also a viable option if the terms and agreement are well articulated for a win-win situation. Unlike the former concession arrangements which ab initio were not diligently structured, genuine concession with government participation in management and board of the company will guarantee post concession monitoring which will include but not limited to agreed timeframe for completion of the plant and facilities. Well structured terms and agreement to guarantee a win-win situation while the ownership of the asset still remains with the Federal Government who can later based on performance and need may partly divest from the project as currently being successfully done in other climes. This option is most preferred and recommended.

Other Matters of Note

- Completing Ajaokuta will immediately trigger operation in the NIOMCO.
- The three rolling mills can be made functional under a backward integration program.
- Activities will also commence on the Ajaokuta - Warri Rail Line with the functioning of the rolling mills.
- Some of the key national projects requiring steel products that can be produced in Ajaokuta can be made to patronize her.
- All these translate to many jobs of high skill and technology transfer for our teeming youths and future generation.

Conclusion

- Honourable Speaker, Honourable members, every major product we consume is either made of steel or the equipment that make them is from steel. The upstream and downstream sectors of the revered petroleum and petrochemical industry are sustained by steel products directly or indirectly. The rig, drills, pipelines, casings, valves and fittings, reactors, etc.

Recently we all hailed record milestone occasioned by the delivery of Egina Floating Production Storage Offloading (FPSO) vessel from Samsung Heavy Industries of Korea expected to produce about 200,000 barrels of crude daily. The gross tonnage of this monster facilities is 220,000 tons deadweight, mostly of steel and cost about USD3.3bn. This is the power of steel. The present unhealthy situation whereby greater percentage of expenditure under our capital projects are spent abroad on importation of equipment, machineries, spares and critical consumables leaving a paltry percentage to cover local materials and cheap labour will be ameliorated to a large extent as the completion of Ajaokuta and similar steel projects will catalyze manufacturing in the country.

Again thank you for this opportunity and God bless the Federal Republic of Nigeria.

(ii) Dr Sola Adelakun:

1. INTRODUCTION

The Ajaokuta steel plant is designed to produce 1.3mtpa liquid steel in the first phase using the well-established Blast Furnace/Basic Oxygen Furnace BF/BOF technology.

The Preliminary Project Report (PPR) for the plant was prepared by the then Soviet Union Company, Thyazpromexport and after much discussion a Detailed Project Report (DPR) was submitted to the Federal Government of Nigeria (FGN) in 1977. The global contract for the plant was signed in 1979 and construction works started in 1981. The expected completion of the project was to be 5 years.

2. PLANT UNITS OF ASCL

The Ajaokuta Steel plant is a massive engineering complex and the facilities can be separated into 3 main plant units.

2.1 Primary Plant Units

These are the units to produce semi-finished blooms using raw materials; iron ore, coking coal and limestone fluxes. The units are sinter plant, coke oven units, blast furnace, basic oxygen furnace and continuous casting plants. Table 1. Apart from one unit of coke oven, none of these plant units have been commissioned for acceptance.

2.2 Secondary Plant Units

The secondary plant units are the billet mill and the three rolling mills. These units have been completed and commissioned and the Light Section Mill (LSM) and Wire Rod Mill (WRM) were put into operation between 1983 and 1988 with a capacity utilization of less than 10% Table 2.

2.3 Ancillary Plant Units

Ajaokuta was robustly designed with a capacity to be self-sufficient to provide engineering support to the primary and secondary plants. Table 3. A number of these units has been put into limited operation since 1990.

Table 1: Primary Plant Units

	Plant Unit	Capacity (tonnes)	Output
1.	2 Nos 5.5m, 49 battery coke oven units	900,000	To produce coke from coking coals
2.	2 Nos sinter plants	1,320,000	To produce self-fluxed sinters for the BF
3.	1 No. 200m ³ BF	1,500,000	Production of pig iron fro BOF and foundry
4.	2 Nos 130t Basic oxygen furnace	1,400,000	Liquid steel
5.	3 Nos 2-strand Continuous Casting units	1,300,000	Blooms

Table 2.1: Secondary plant units

Plant Unit	Design capacity (Tonnes.per annum)	Product Mix
350mm Light section mill and bar mill	415,000	Equal angles, flats, lexagams channels and rounds
150mm WRM	260,000	Wire coils
700mm medium section mill	615,000	Medium sections
900/630mm Billet Mill	835,00	Billets

Table 2.2 : Commissioning of secondary plant units

1983	—	Commissioning of the light section mill
1984	—	Commissioning of the wire rod mill
1987	—	Commissioning of the Billet mill
1992	—	Commissioning of the structural mill

Table 3: Ancillary Plant Units

	Plant description	Capacity
1.	Thermal Power Plant	110MW of electric power
2.	Forge and fabrication shop	4,200 tonnes forgings, 4,600tonnes fabricated structures
3.	Machine Tool Shop	19,000 tonnes of machined products
4.	Foundry Shop	7,000 tones of castings.
5.	Power Equipment Repair Shop	Repair of generator up to 800KW and transformers up to 1,600 KVA

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| 6. | <i>Rubberizing Shop</i> | <i>Repair of 25,000 m³ per annum belts and manufacture of seals and adhesives</i> |
| 7. | <i>Alumino- silicate refractory plant</i> | <i>43,400 tonnes of fire clays and granular masses</i> |
| 8. | <i>Chemical water treatment plant</i> | <i>Production of demineralized water for industries</i> |
| 9. | <i>Air Separation Plant</i> | <i>Production of Oxygen, Nitrogen and Argon production of carbon dioxide</i> |
| 10. | <i>Carbonic Acid Plant</i> | <i>Production of carbon dioxide</i> |

3. **CURRENT STATUS OF ASCL PLANT UNITS**

3.1 **Primary Plant Units**

The primary plant units are yet to be fully completed and hence have not been put into operation. They are unlikely to be operational until a solution is found to a cost effective mode of supply of coking coal to the coke oven plant units. The primary plants are interconnected as the output from one plant unit becomes the input for the other. There are strict specifications for the coking coal required for the BF and currently, none of the Nigerian coals can meet 100% requirement of the BF. The best that could happen is to blend limited quantity, of local coals with imported coals. Unfortunately, the infrastructure facility to ensure sustainable delivery of imported coking coals to Ajaokuta is currently unavailable.

3.2 **The Secondary Plant Units**

The secondary plant units have been commissioned and the wire rod mill (WRM) and light section mill (LSM) were put into operation as far back as 30 years ago in 1988. These plants can be put back into operation after inspection and rehabilitation using either imported billets or blooms.

3.3 **Ancillary Plant Units**

The various ancillary plant units of Ajaokuta were designed to support both the primary and secondary plant units. A study of the characteristics of these units shows that these are huge engineering investments that need to be harnessed and put into commercial use.

There were attempts by some European companies to enter into joint venture commercial operation of these units with Ajaokuta Steel Company but firm agreements were not concluded.

4. **OPTIONS FOR AJAOKUTA STEEL PLANT**

There are 2 options to enable sustained operations at Ajaokuta Steel plant.

1. *To complete the primary plant units and put their operations on hold until sustainable and cost effective mode of supply of coking coal to the to the plant is assured.*
2. *To map out business plans for the operation of the secondary units and commercial operations of the ancillary units.*

4.1 **Option 1: To complete the primary plant units and put their operations on hold.**

The blast furnace is a counter - current fluid solid continuous operation unit. Coking coal is required in the blast furnace for:

- *Energy provision*
- *Reducing agent*
- *Burden bearer*

It is the third factor of coking coal being a burden bearer that imposes strict conditions on the quality of coal used. Coking coal is the only material that remains solid to the bottom (hearth) of the furnace, hence the coking coal must produce coke that is resistance to being crushed.

A crushed coal will impede proper fluid flow (hot air) into the furnace. Effort has been made to find suitable coking coals in Nigeria, but for a number of reasons, this has proved unsuccessful. The best that could be achieved would be to blend our local coals with imported coals; even then the percentage of local coals that can be used is of a limited percentage. Hence, for Ajaokuta to operate in an integrated manner there is the need to provide transport and handling infrastructural facilities, namely bulk ship unloaders, storage yard and stacker reclaimers to load the coals from storage into rail wagons for transportation to Ajaokuta.

Ajaokuta requires large tonnage of coals about 1 mtpa, and this requires proper logistical planning. The BF is a plant unit which must be operated continuously as stop start operation will drastically affect the refractory linings which are supposed to be relined normally in a 100 year cycle. Opting for the completion of the primary units and putting them on operational hold until sustained infrastructure facilities are provided may require a delay of 4-6 years depending on the transportation and handling option adopted.

The original DPR concept was for coking coals to be brought in through Onne port and transported by rail through Oturkpo to Ajaokuta. This will entail the provision of bulk handling facility at Onne Port and the installation of rail line from Onne to Ajaokuta. A railway bridge for this rail line is already in existence close to Ajaokuta.

Alternatively, it may be advantages for the Nigerian economy to aim at solving the raw materials transportation logistics of both DSC and Ajaokuta simultaneously. This is because DSC requires imported iron ore. The proposal is to dredge the Escravos River to 10m depth thus allowing for large sized vessels up to 35,000dwt to approach DSC port instead of the current 10,000dwt. At the DSC port, storage facility could be established for Ajaokuta's coking coal and stacker reclaimers provided to load the coals on to rail wagons.

This option could be approached in phases with only the initial provision of handling facility for the imported coking coal. This will however limit the volume of coking coal that can be handled at DSC port and the ensuing high freight cost per tonne may impose prohibitive operational cost to produce a tonne of steel products.

It should also be noted that DSC is no longer a Federal Government owned unit as it has been privatized to Premium Steel and Mines Ltd. a subsidiary of Stallion Group.

4.2 Option 2: To map out business plan for the commercial operation of the billet mill and rolling mills as well as the ancillary units.

The secondary and ancillary plant units can be made available for operations in short period and it is proposed that business plans for the operation of these units should be urgently provided by Ajaokuta Steel Company.

The engineering complex of Ajaokuta has facilities comparable to medium scale engineering companies anywhere in the world and there is no reason why these ancillary units cannot be operated profitably. A number of years back, Eisen Bau Essen (EBE) of Germany and Voest Alpine of Austria did present independent proposals for commercial operation of the engineering facilities, but the proposal did not reach meaningful conclusion.

The Training Centre at Ajaokuta is massive and can be transformed into a Technical University for the metallurgical industry in a similar manner that PTI Warri has been turned into a Technical University for the oil and gas industry.

5. CONCLUSION

There is no easy way out to enable sustainable operation of Ajaokuta steel plant. Transportation infrastructure for raw materials, chiefly coking coal is an issue that must be resolved if Ajaokuta steel plant is to be operated as an integrated plant unit. Failing the provision of funds to resolve the infrastructure problem, Ajaokuta will remain idle or at best only operate the rolling mills and the ancillary units ..

The option of a change in technology to avert the problem posed by coking coal is not a solution as a viable alternative technology using the Midrex Direct reduction process requires high grade iron ore. The Itakpe iron ore is low grade although with the proposed double beneficiation, the iron ore quality can be improved. However the problem of high silica plus alumina in the ore body will be passed on to the steel plant with the increased negative cost on refractory consumption. The only hope is that with the current use of slag foaming practice and water cooled panels in electric arc furnaces, the level of refractory impairment may be reduced. The dependency on electric arc furnace for melting and dependence on high electrical energy supply may be a disadvantage.

An alternative technology option is the use of low shaft vertical furnaces using non coking coals. The advantage of this option is that pig iron hot metal can be produced using local coals and out of the primary units only the blast furnace will be side-lined. The problem is that most of these low shaft furnaces have low output and are not universally proven. The steel industry in Nigeria requires large volume of raw materials and the provision of strong road linkages to the location of domestic raw materials such as limestone, dolomite and refractory clays should be closely investigated and action taken.

Finally, the issue of manpower training for the steel plant should be given adequate consideration as most of the trained technical staffs have retired from service.

(iii) **Hussaini Abdulrahman (Chairman Total Steel Limited):**

AJAOKUTA STEEL PROJECT: THE NEED FOR A PARADIGM SHIFT

To move the steel sector forward in a country where 95% of private sector investments are owned by foreigners leading to serious capital flight we demand a paradigm shift from the present state of phobia and distrust of alternative suggestions by our colleagues in the public sector to one of openness, accommodation and constructive engagement. In one of my several trips to China I was taken to Pangang Steel plant where excess blast furnace gas was used as heat and reduction fuel to sustain a 300, 000 tons per annum Direct Reduce Iron plant!!! So what is the justification for sticking doggedly to the position that the two technologies of Blast Furnace and Coal Based Direct Reduced Iron are necessarily mutually exclusive and disruptive of each other? We may well find out when we eventually commission the blast furnace, substantial financial gains will result from reducing the amount of coal required in our Direct Reduced Iron plant when blast furnace gas becomes available.

None Coke intermediate solution:

The sad and very demoralizing fact is that most public sector metallurgist I confronted on the Ajaokuta issue hardly saw anything financially and morally wrong with spending USD 5.7 billion on a 1.3 million tons capacity blast furnace based integrated steel plant over a 35 year period without completing the plant and still to argue that the only way forward is to sink another 1.1 billion USD on the same plant without tolerating other views that think outside the traditional box. Were we to send the data relating to Ajaokuta Steel Plant to the Guinness Book of World Records to be certified as the longest, most expensive and wasteful Steel Plant project in human history I am certain it will be confirmed as such. Yet patriotic and decent Nigerians who insist that the overall performance and viability of the project be judged against international techno-economic and public accounting best practices, sound accounting principles and comparative economic advantages derived from similar projects initiated at the same time in other countries are coldly rebuffed.

There is virtually nowhere in the world today where the idea that money expended on huge national projects should be considered as a sunk cost. That idea belonged to the era of command economies of the socialist world who have since reformed and now insist on projects paying for themselves so that they can be sustainable as well as pay for other projects. In the business plan of the People's Republic of China's Three Gorges Project (The world's biggest hydro electricity project) which cost 25 billion US Dollars for example, repayment of the whole investment was planned to be made in 10 years and that was achieved. I am certain that our friends in the public sector are not saying that we are estopped from projecting what the opportunity cost of 5.7 billion USD tied down to one Government

non performing project for 30 years (if we make room for a legitimate construction period of 36 months) without giving 1 USD return should just be over-looked and regarded as a sunk cost. The opportunity cost of the non performance of ASCO is best imagined if we judge it against a similar plant that was commissioned on time, had a project cost and investment payback of 10 years and subsequently earned profits of 10% of investment every year for 20 years, for the investor (in our own case the FGN) and cumulative and investible profits of 11.4 billion USD. (Enough to build 20 more steel plants of 1.5 million TPA).

Ajaokuta Steel uncompleted plant has outlived at least four of its Chief Executives who sadly never lived to see the plant run yet in the quest for a pragmatic and realistic way forward an extremely powerful lobby of technocratic civil servants and politicians who see nothing wrong in sinking public funds into the project without accountability stand resolutely on the way of a more realistic, more pragmatic and accountable path. Using international best practices it takes 35 months to build a 1.5 million ton capacity integrated steel plant and not 35 years. Likewise it takes 450 million US Dollars to build a 1.5 million tons per annum capacity blast furnace based integrated steel plant (which includes: Land 800 hectares, 120 megawatts captive power plant, 500,000 tons per annum capacity wire rod mill, 500,000 tons capacity section mill and 500,000 tons capacity hot strip mill with all infrastructure of the plant inclusive) and not 5.7 billion USD.

Has anybody paused to ask why there is no alternative accountable business model and plan to complete Ajaokuta Steel Plant which involves risk sharing by stake holders and private sector investors other than constantly asking the Federal Government of Nigeria to cough out huge sums of money to foreign contractors who in most cases never sign up and contractually commit to a long term sustainable running of the plant? There is indeed ample evidence to show that in the last three decades close to a billion US Dollars was offered via European metallurgical plant building contractors to various Government owned steel plants as technical assistance with very little to show for it. The practice which constituted a great leakage to our national economy only stopped ten years ago when the OECD Secretariat raised a query and instituted an inquiry which showed that most of the Government steel plants being offered technical assistance were comatose!!! In the same vein the Sani Abacha Government was almost signing a 600 million USD flat sheet expansion project to Ajaokuta steel plant which then was still in its current state of non completion of the first phase and without attaining liquid steel production when the regime suddenly ended and we narrowly escaped another monumental fleecing of our national economy.

Another very clear example of the leakages and short changing of our national economy happening under the watchful eye of our steel sector stakeholders is the building of the so-called super concentrate line in the National Iron Ore Mining Company Itakpe, a highly unnecessary and undesirable project. Despite the fact that the international benchmark and standard of iron ore concentrate quality is 63% to 65% Fe and that many Direct Reduced Iron Plants in the world feed in as low as 570/0 Fe without any problem, under the pretext of Delta Steel Company Limited a Federal Government. natural gas based Direct Reduced Iron facility could only economically use 66% to 68% Fe, the Federal Government was misled into spending over 110 Million Euro to build a Super Concentrate line which will only improve the quality of the normal NIOMCO beneficiation line by 4 percent. I was greatly delighted when recently I had the benefit of reading an audit report evaluating Federal Government contracts when the report passed serious strictures on those involved in promoting more expenditure for the Super Concentrate line when indeed the normal Concentrate Line from which the Super Concentrate line gets its feedstock was in tatters and required huge investments.

The recommendations of the report reinforced my belief that all is not lost with our value system. Some patriotic Nigerians still live up to the highest standards of probity and accountability. I challenge all Nigerian Metallurgists and Mineral Process Engineers to an open debate on the techno economic desirability of the NIOMCO Super Concentrate line when indeed NIOMCO was built primarily as Ajaokuta Steel Company captive mine and the amount wasted on the Super Concentrate line could well have been enough to build a completely independent Beneficiation plant designed to meet the requirement of Delta Steel Company.

The truth of the matter lies in the fact that a sensible solution for the actualization of the completion of the Ajaokuta Steel Plant lies in implementing a smaller budget business plan which will involve the investment of a maximum of USD 200-300 million to install a 70 ton capacity electric Arc furnace to commence the production of billets via 100% initial steel scrap melting within a year and concurrently investing in the building of 3 number 600 tons per day pellet plants, SLRN Rotary Kilns equipped with hot charging system into the EAF to utilize our local sub bituminous coal and local iron ore available within 100 kilometers of Ajaokuta steel plant to target the production of 600,000 tons per annum of liquid steel. This budget includes the cost of installation of a slab caster and a hot strip mill.

The profits made from the operation of the plant which is reinforced by the double advantages of having an existing captive Itakpe Iron Ore mine and a potential partner's captive Iron Ore and bituminous coal mine will then be ploughed first into a techno-economic viability and feasibility study of the blast furnace route to address the changes and innovations introduced in the last 35 years to the blast furnace technology route such as reduced coke usage via pulverized coal injection (PCI) as well as address the human capital, logistical and infrastructural deficits required to operate the blast furnace efficiently and sustainably. Ditto arranging access to more proximal indigenous, South African and Mozambican coking coal mines.

I must say that the often highly exaggerated infrastructural requirements of the 1st phase of Ajaokuta steel plant can be demystified by the experience of countries such as India and China where there are several integrated steel plants operating in the middle of nowhere with neither rail transport nor river or sea transport but which still operate blast furnaces or Direct Reduced Iron plants of 500,000 tons to 600,000 tons per annum capacity, by transporting coal and other critical steel production inputs by road since the bulkiest item is iron ore in which vicinity the steel plants are usually located.

The following are the steel plants of 600,000 tons capacity and above, their capacities and location which operate without river or rail links and are solely dependent on road transportation:

1. **Prakash industries Ltd. Chhattisgarh, India**
 0.8 million ton capacity
 No rail
 1-5 x 500 TOP ORI
 2-250 MWCPP
 3-SMS, CCM, Rolling Mill
 4-Wire Rod Mill
2. **Tata Sponge Iron Ltd. Joda, Orrisa India**
 0.6 million ton ORI Unit
 No rail
 Near Iron Ore mines
 1-2x350 TPO ORI
 2-2X500 TPO DRI
3. **Himanshu Steel Syria**
 0.6 million plant capacity
 MBF, BOF, CCM and Bar mill
 Iron ore and met coke only import
 Factory to port around 250km no rail line.

It can be safely concluded that right sizing of Integrated Steel plants and choosing capacities within the bracket of 600,000 TPA to 800,000 tons TPA is imperative to being able to run and operate such plants without the necessity of investing huge sums of money on rail and other infrastructure. This point further reinforces the significance of the non coke intermediate solution to the completion of Ajaokuta steel plant since the non coke model (600,000 TPA) suggested above can be very easily operated notwithstanding the present infrastructure deficit. Ditto the choice of a 70 tons capacity (70 tons per heat and not 70 tons per day) EAF is right sized to accommodate the limitation imposed by the 110 tons Megawatts TPP without additional investment.

The anxiety expressed on the availability of scrap to sustain the 600,000 TPA plant is unfounded. Several Indian and Chinese plants in Nigeria which have run uninterruptedly for the past 20 years fall within the bracket of 500,000 TPA to 700,000 TPA. The problem with us and our friends in the public sector is that while failing to take up challenges and risks and while refusing to get our hands dirty, smart foreigners quietly come into our backyards and set up plants based on 1000/0 scrap melting whose combined capacity amongst 33 of them now exceeds 3 million TPA. Our recent national scrap survey shows that sourcing 300,000 tons per annum of scrap steel a year to be concurrently followed by feeding DRI within a short time is sustainable. Ajaokuta's location with a captive river port makes it ideal for the exploitation and delivery of marine based and oil and gas operations derived scrap in addition scraps sourced from the hinterland.

According to economic calculations embarking on a total rehabilitation of the rolling mills, the power plant, the workshops and other auxiliary units and running them commercially without integrating a backward integration module to produce liquid steel and billets in Ajaokuta is not profitable. Of the several companies who have in the last five years signed memoranda of understanding on the rolling mills none has so far been able to roll a single billet into finished product for the precise reason of the failure of the parties to understand the true economic and market dynamics of the Nigerian Steel market. Can anyone successfully rehabilitate and run Ajaokuta rolling mills based on a business strategy of importing billets converting them in Ajaokuta and selling in the same market where 33 Indian, Chinese and Nigerian melt shops are already producing not less than 3 million TPA? At what price can such imported and converted billets be sold in the Nigerian market?

When the idea was first mooted I punched my calculator and immediately found that such a venture will never be profitable as the total cost tied to such an exercise will put the selling price far above the selling price of the finished products of the local melt shops. Also were we to explore the alternative of relying on the Indian and Chinese local producers to offer the parties billets from their plants, experience has shown that they will only offer those billets at a price which does not reduce a single kobo from the profits they would have made selling their finished products. We must therefore avoid an attitude of unambitiously micro managing Ajaokuta Steel project because the Federal Government is subsidizing it by picking up the salary and other bills. While I would not describe the management and workers of Ajaokuta as being idle, I will strongly advocate a more ambitious initiative that will put those willing, able and enthusiastic workers who each time I visited always lamented about the plant not having been commissioned and their skills acquired for steel production being wasted to the task of implementing the non coke business plan to produce liquid steel of 600, 000 tons within the next 12 months. For the real margin and profitability in steel businesses all over the world is now directly tied to ownership of complete value chains and inherent in the control of iron ore, coal, dolomite and other steel inputs deposits the reasonable budget option of which is embodied in the non coke intermediate plan.

I hereby make the following recommendations:

- 1. The Federal Government should not rush to take decisions on the completion of Ajaokuta steel complex without carrying out nationwide consultations among stakeholders within the private and public sectors on the viability of various options to avoid being misled into wasting public funds in non viable and non sustainable business models and plans for the completion of the project.*
- 2. The Federal Government is invited to note that the old business model of patronizing wholesale foreign metallurgical plant building contractors who take advantage of lucrative contracts without committing to fabricating the plants in Nigeria nor investing in the long term sustainable running of the plants is the reason why the Government's major investments in the steel sector have remained comatose without corresponding returns on the Government's investment. It is recommended that henceforth the new approach should involve Public Private Partnerships (PPPs) with Nigerians who have a proven track record of investment in the sector via Public Private Partnerships which allow Government and the private sector to jointly share risks, responsibilities and benefits.*

3. *The Federal Government should as a matter of policy deliberately promote the building and ownership of steel plants by Nigerians who should be encouraged to hire expertise abroad using the Dangote model to avert further capital flights in a sector highly dominated by foreigners.*
4. *The Federal Government is invited to note that nearly all Governments of the world today have stopped direct public sector budgeting for their investments in industrial and mining projects. What most Governments now do to avoid promoting corruption is to grant loan guarantees where it is satisfied that the feasibility and business plan is convincing and viable. The managers of such State Owned Enterprises are then held strictly to account for the actualization of the feasibility and business plans and derogation therefore is immediately sanctioned.*
5. *The Federal Government is called upon to define its national priority projects emanating from its manifestos and programmes and to detail a national infrastructural industrial and agricultural development plan which will task indigenous steel entrepreneurs with the long term investment buy-in and supply of steel to such projects while the Government provides off take agreements and loan guarantees to facilitate the financing of capacity building to support such projects. The national railway expansion program, the national tractor and Agricultural Implements Manufacturing Program, the national automotive policy, the national power transmission line expansion projects must be tied up to industrial initiatives which promotes local capacity building and employment.*
6. *The Federal Government is invited to note that in public interest and in furtherance of its declared intention of blocking all leakages to our national economy it must avert the convectional public funding process where all the risks of project delivery reside 100% with the Government which bears the burden of cost overrun, time delay and performance failures. The Federal Government is called upon to establish a firm policy of integrating the designing, building, operation and financing of public sector projects in a single financing module, package and business plan which improve economies of scale and bring down the total project cost in partnership with competent Nigerian entrepreneurs.*
7. *The Federal Government is called upon to prioritize the completion of Ajaokuta Steel Project taking points numbers 1 to 6 above into consideration.*

I conclude by calling on all patriotic Nigerians to wake up from our deep slumber and live up to the responsibilities of our generation by ensuring that we and not foreigners run our major and strategic Industrial National Assets such as Ajaokuta and our petrochemical and fertilizer plants. Without doing so our National Economy will continue to remain fragile and the value of our Naira weak. If we do not care and fail to act proactively and prioritize the building of factories to roll back imports and create jobs for our teeming youths under the pretext that we have no money we shall be forced as it is already happening to borrow money to buy arms and ammunition to fight internal insurgency and sustain Internally Displaced Persons. While building factories brings prosperity and stops insurgencies buying arms and sustaining IDPs only worsens the state of our economy.

Yours faithfully,

(Signed)

Hussaini Abdulrahman

Chairman: Total Steel Ltd.

(iv) **Barr. Natasha Hadiza Akpoti:**

***Questions and expert solutions over Ajaokuta steel Company Limited (ASCL)
and National Iron Ore Mining Company (NIOMCO)***

Olusegun Obasanjo —

1. *What about the bilateral agreement of March 2001 between Nigeria and Russia?*
2. *What about Putin's letter on ASCL?*
3. *Why and how was Sol Gas's technically qualified to revive ASCL and NIOMCO?*
4. *How were ASCL and NIOMCO concessioned to GINL?*

In March 2001, President Obasanjo in the company of his economic team visited Russia and entered a bilateral agreement with Russia with regards to the transfer of high technologies ... ASCL amongst others in focus. This led to 40 experts from TPE conducting technical and financial evaluation of ASCL. TPE also stood as Nigeria's collateral for a \$600m loan from BNP Paris. By an act of nepotism, President Obasanjo defaulted on the Russia's agreement and concessioned ASCL and NIOMCO to Sol Gas Energy; a company closely affiliated with his son Gbenga Obasanjo. Sol Gas lack of technical capacity had them bring ISPLATJ GINL as technical partners. GINL proceeded to vandalize the steel complexes.

Kayode Fayemi, Minister of Solid Minerals —

Questions on the Reconcession of NIOMCO, Itakpe to Global Infrastructure Nigeria limited AKA Global Steel Holdings Limited on the 1st August, 2016.

1. *What parameters were considered for the reconcession considering the fact that:*
 - (a) *Going by the procedural order in the Arbitration case reference: 15 539/VRO (c. 15 541/VRO) between GINL and FGN over the termination of ASCL and NIOMCO's concession by late president Yar'Adua: Nigeria stood a good chance of winning.*

Why was the out of court settlement sought by ex-AGF Adoke?

- (b) *The \$525m damages levied against the FGN in favor of GINL as contained in item 6 (a) of ex-AGF Mohammed Bello Adoke's memo to President Goodluck Jonathan dated 12th December, 2014 and referenced: HAGF/SH/2014/VOL.2/121 was estimated by a presidential committee NOT the Arbitration Court of London.*

Where is the report of the presidential committee?

This is proof that Nigeria owes GINL nothing and the re-concession of NIOMCO to GINL is baseless and a sham.

- (c) *On Wednesday, 2nd April, 2008, the Federal Executive Council considered the Magaji Inuwa report and voted to terminate the GINL's concession of ASCL and NIOMCO. Was any FEC held before the reconcession of 1st August, 2016?*

Only a FEC can override the decision of another FEC.

- (d) *Was the Inuwa Magaji report upon which Yar'Adua terminated the concession considered before the Arbitration court, the presidential committee etc before the reconcessioning of 1st August, 2016?*

- (e) Why was President Buhari's instruction in green quote not acted upon:

If Mr President, vide a letter No. PRES/97/HAGF/21 of 27th June, 2016, has approved and directed that your office should take the following steps;

Schedule an early date for the execution of the modified concession agreement for NIOMCO with Global Steel Holdings Limited/Globol Infrastructure Nigeria Limited in Abuja; and

Schedule thereafter, a composite meeting involving the Russian company, Tyazhpromexport company (TPE), and or a separate meeting with the company, for the purpose of finalizing the discussions of the Russian proposals for the reactivation of Ajaokuta Steel Company Limited"

- (f) What is happening to NIOMCO today?

Yahaya Bello:

What is Ajaokuta Kogi Nigeria Limited?

The idea of privatizing ASCL via concessioning has created green-eyed monsters. Kogi state governor Yahaya Bello in collaboration with the new owners of GINL headed by Alhaji Musa Bello by CAC's administrative fraud registered a shell company named Ajaokuta Kogi Nigeria limited without state or national participation.

Kemi Adeosun, Min of Finance:

Considering the fact that Abacha's loot is largely monies from Abacha's shady ASCL's debt-buy back, all monies recovered should be used to revive ASCL and NIOMCO. Read page 11 of the UN's report and excerpts in red

<http://www.un.org/en/africarenewal/subjindx/subpdfs/131niguillf>

" ... In another stunning disclosure, a government spokesman said in December that the administration was investigating an alleged \$2 bn fraud by some members of the previous regime. This involved the withdrawal in 1996 of \$2.5 bn of public funds to settle debts owed to Russia for the construction of the Ajaokuta steel plant, but which in reality had been discounted to only \$500 mn in a secretly negotiated debt buy-back deal. Local and foreign media reports have speculated that Gen. Abacha may have had more than \$3 bn stashed away in overseas banks ..."

The Debt Buy Back

Nigeria's contract with TPE was to construct ASCL for five billion German Deutschmarks (DM) and such that the Nigerian steel authority gave TPE promissory notes guaranteeing payment to the company. When Nigerian government suspended payment and TPE left, TPE sold off these instruments to recover some of the debt owed to the company.

In October 1995, a series of secret debt buy-back transactions took place whereby the debt instruments were sold at inflated prices to Liberian companies purportedly owned by the Abachas - Parnar Shipping Corporation and Mecosta Securities. This involved the withdrawal in 1996 of \$2.5 bn of public funds to settle debts owed to Russia for the construction of the Ajaokuta steel plant, but which in reality had been discounted to only \$500m. Obasanjo in 1999 settled debt through OMPADEC.

In conclusion:

President Trump's recent pronouncement on the revival of America's steel sector against all odds only proves that the world over, steel making is a political not commercial decision. Hence, the strategic importance of ASCL to the ailing Nigeria's economy requires smart inwardly-driven and patriotic political and economic decisions such as:

1. NIOMCO's reconcession of 1st August, 2016 to GINL must be terminated with immediate effect.

2. *EFCC to conclude the prosecution of GINL for economic crimes according to Late Yar'Adua's 2008 orders.*
3. *ASCL and NIOMCO must not be privatized or concessioned but be owned 100% by the FGN and operated alongside the original builders TyazhPromExport (TPE) from Russia.*
4. *ASCL and NIOMCO must not be separated in ownership.*
5. *FGN should meet face to face with the government of Russia to discuss the modernization and revival of ASCL and NIOMCO.*
6. *ASCL falls under contractual exemptions, which allow for sole sourcing thereby engagement must be G 2 G direct... no middleman and no agent.*
7. *There must a holistic redesign of the steel master plan and a 35 year undisruptive policy to protect ASCL from political influences.*
8. *FGN's contract with Russia must be technical only with Nigerians wholly owning and operating upon the transfer of technology.*
9. *Nigeria should device additional fund-raising models which will include a call for citizen's participation. This will compel transparency and accountability.*
10. *Nigeria must be ready for sanctions; for all its worth, trade is always better than aid.*

Thank you.

Natasha Akpoti

(v) Sanusi Alhaji Mohammed:

*Ref: AISA/HMMSD /MET -15
The Honourable Minister,
Ministry of Mines and Steel Development
2, Luanda Crescent,
(off Adetokunbo Ademola Crescent)
Wuse II, Abuja, FCT.*

17th November, 2017

Dear Sir,

CRITICAL OBSERVATIONS ON THE METALLURGICAL SECTOR

AISA has made several presentations on the Steel Sector in Nigeria.

Most of the presentations were either ignored or not addressed at all and this has resulted in the stagnant, if not retrogressive, status of the sector.

We wrote to the Ministry of Mines and Steel Development to correct the erroneous impression the Ministry has been having in recent past that Ajaokuta Steel Company has now been reverted to the Federal Government. This assertion is making it look like Global Infrastructure Holdings Limited (GIHL) has at any time owned Ajaokuta Steel Company.

GIHL took the Federal Government to Arbitration Court in London, as per the signed Agreement.

Article 9.2.2 as contained in the Arbitration Rule of the International Chamber of Commerce, in case reference 15 539/VRO (c. 15 541/VRO) stated:

"..... particularly since Respondents have in place an undertaking to preserve the present status quo, which encompasses a commitment not to transfer any ownership of the facilities which are the subject of these disputes."

By the understanding of all relevant stakeholders, Article 9.2.2 of the Rules of the International Chamber of Commerce does not transfer ownership of Ajaokuta Steel Company to any party other than the Federal Government of Nigeria.

It was the Minister of Mines and Steel Development who made the statement that indicated GIHL has authority on ASCL and after negotiating the so-called "Modified Concession Agreement", which was signed on 1st August, 2016, that Ajaokuta Steel Company has now reverted to the Federal Government.

The Statement credited to one Dr Nwanbuoke that "Dr Kayode Fayemi was misleading stakeholders and that the AJAOKUTA STEEL COMPANY MATTER was not resolved" got its credence from the several public statements and interviews in which the Minister alluded to this. If the Honorable Minister has listened to the relevant stakeholders out cry, particularly the AFRICAN IRON AND STEEL ASSOCIATION, the issue would not be in such a mess. Now it is the words of GIHL against that of the Honorable Minister.

Of recent the Minister has been making statements in the media that "we don't have capacity to complete Ajaokuta". This is being economical with the truth. Ajaokuta require just about US\$1 billion to complete to production level, thus the completion of the iron and steel making facilities, relevant external infrastructure and the development of essential raw materials mines in and around Ajaokuta (including linking them with relevant transportation and conveyance systems). This amount is definitely within the capacity of the Government to provide for the Government to fulfill it's promises of diversifying the sources of revenue, including employment generation and improving security and safety of Nigeria and Nigerians. Similarly, the Minister has stated that Government policy on Steel Privatization is yielding results, as stakeholders we have not seen anything to support the Minister's statement, in fact there has been no policy on Steel since the coming of this Government. There have been political statements just to mention Steel in line with the name of the Ministry, Ministry of Mines and Steel Development. In reality the Ministry is only a Ministry of Minerals and Mines Development with steel completely expunged.

Of recent, the Ministry organized a class 'A' conference of stakeholders in the Mine and Minerals sector in Abuja. It was a very well attended conference during which period the National Council on Mining and Mineral Resources (NCMMRD) was established. There is already in existence the Council of Mining Engineers and Geosciences (COMEG), no mention of the metallurgical sector at all during the proceedings, even though there is in existence the National Steel Council Act since 1979 (Act No. 60), this Act has never seen the light of day till today.

Stakeholders in the Metallurgical (Iron, Steel, Aluminum, etc.) sector have been calling for similar conference/Summit to fashion out the way forward for the sector but so far no indication that this would happen any sooner.

The Ministry has been tautological in the nomenclature SOLID MINERALS. It should be noted that all minerals are solid, thus there is no need to add solid in the name, this is a dictionary definition of Mineral: "solid homogeneous inorganic substances occurring in nature having a definite chemical composition".

Relevant stakeholders in the metallurgical sector are not consulted in most decisions of Government, typically the so called "MODIFIED CONCESSION AGREEMENT" which was signed between the Ministry of Mines and Steel Development and the Global Infrastructure Holding Limited (GIHL) on 1st August, 2016. This was a great mistake and a disservice to Nigerians.

Stakeholders observe that this agreement is going to lead Nigerian Government to multiplicity of litigations and claims.

Metallurgical stakeholders have been calling for Steel summit to be organized by the Ministry, but this is hitting a hard rock.

A National Metallurgical Bill has been passed by the National Assembly in 2015 and sent to Mr President for his assent to pass it in to law. This Bill has been returned to the National Assembly by the Presidency. The none assent of the Bill is what makes the Metallurgical sector very vulnerable, particularly-the-private-sector- metallurgical industries that hang on profit making rather than meeting production best practices and meeting international quality standards. Not one of the privately operated metallurgical industry in Nigeria has the requisite quality control equipment to ensure meeting the international standards.

Of recent, a private scrap processing company, AFRICAN STEEL has publicized that there is a strong indication that after cement, Nigerian Steel Industry is the next sector to watch as African Industries Group, the largest manufacturer in the country, has started exporting the products to Morocco, Egypt and Ghana " ... that the Company is currently exporting 200,000 metric tonnes yearly out of its 1 million metric tonnes per annum production capacity".

We appreciate the efforts of African Steel Group, but some questions need answers, thus:

- 1. How much is the Company capable of producing per annum? It is not the installed capacity that is important, but production capacity.*
- 2. How much is Nigeria's local requirements, are these requirements being satisfied before considering export?*
- 3. Hon Kayode Fayemi granted interview to EVEREST AMAEFULE and SHOLA FABEYI, in which he mentioned that "three of the companies producing steel are IOS certified". In the Metallurgical Standards, Certification agencies the world over, we cannot trace any IOS as a certifying agency. We do have ISO (International Standards Organization) only amongst others. Known standards are the German Standards, the British Standards, the American Standards and the Russian Standards, etc. that meet the International Standards.*

We hereby categorically state that not one of the privately owned iron and steel conversion companies own the complement of quality control and assurance equipment and facilities. It was only the public owned steel companies like Ajaokuta Steel, Delta Steel, Jos Steel, Oshogbo Steel and Katsina Steel Companies that owned relevant quality control and assurance facilities as captive facilities.

With the hurried privatization exercise that transferred ownership of all public steel companies, except Ajaokuta Steel Company, we are not sure of the current status of these facilities.

It is only logical to assume that all privately owned companies are primarily set up to maximize profits, thus they cut corners to minimize the cost of investment and that is why they do not consider inclusion of adequate quality control facility in their planning and construction of their companies. Here we call on Government to take stock of collapsed buildings and bridges in the country.

The only facility that was designed and built for metallurgical quality test is the one established by the Government at the NATIONAL METALLURGICAL DEVELOPMENT CENTER (NMDC), Jos in Plateau State. This facility is commercially accessible but unfortunately there are no regulatory enforcement authorities in place. The National Metallurgical Bill, if accented by Mr President, would have given the relevant power and authority to regulate and enforce discipline and international best practices in the metallurgical industries in Nigeria.

By the above we therefore question the authenticity of the claim by the African Steel Group as to being internationally certified of their products.

We read in one of the Nigerian National Dailies that "GSHL has faulted the statement credited to the Minister of Mines and Steel Development, Dr Kayode Fayemi, that the ownership of Ajaokuta Steel Company Limited has now reverted to the Federal Government.

Global Steel in rebuttal, said the Minister's statement was capable of misleading stakeholders and urged Fayemi to set the records straight."

Hon Minister Sir, there is need for clarification on this subject matter otherwise we would be right to continue assuming some funny and fishy games that is why stakeholders are not involved and not adequately-briefed of the Ministry's decisions.

In 2014 a company that was given memorandum of understanding to operate a facility in Ajaokuta Steel Company Limited (ASCL) arranged a supply of billets from one of the African Steel Group Companies, the Abuja Steel Mills, located at Suleja, FCT. Some quantities of billets was supplied to the Company and the billets were accompanied with certificate of quality conformity. On production trials at the ASCL rolling mill, 15 billets were passed through the rolling line and not one of the billets passed through due to inherent manufacturing defects like cracks and inclusions. For that the certificate of compliance that accompanied the billets was just a false declaration.

On the issue of Technical Audit for ASCL, the African Iron and Steel Association wish to propose to revisit the 2010 Technical Audit that was done and was accepted as a good job. This Technical Audit is still valid with only minor up date that is required to be done. The major actors of the Audit are still available and can easily accept to review the audit and update it at far less cost to Government, than conducting fresh Audit. Our reason is simply that it was after the extensive damage and destruction inflicted on the machinery and equipment, including removal and relocation of many items as well exporting some to other countries by GIHL from ASCL that the Technical Audit was conducted and no further damage was inflicted apart from the TPP jTBS which was given to some other company under Memorandum of Understanding. We understand there is need to carry out fresh Technical Audit in these units.

The African Iron and Steel Association has written to the Government advising it to create Ministry of Metallurgy (iron, steel, aluminium, tin columbite, etc) on its own right to avoid the sidelining of the Metallurgical sector by combining it with others like Power, Mines and Steel; Power and Steel; Mines and Steel Development; etc. If one takes a cursory look at all these combinations, the steel aspect is always relegated to the back ground unless if it is for the annual budgetary purpose. Today's Ministry of Mines and Steel development has devoted 80% of its activities to Minerals and Mines. Steel is only mentioned if allocation of money is involved. All other statements on steel are only political statements (see the Ministry of Mines and Steel Development News Letter at: andsteel.gov.ng).

Minerals and mining the minerals are important only if the mineral is converted to useful materials for humanity, thus the importance of the Metallurgical sector.

PRAYERS:

- 1. We understand there is a plan to conduct another Technical Audit on the Ajaokuta Steel Company. It is our belief that the 2010 Technical Audit on ASCL is still relevant with only some update required. The Technical Experts who conducted the Technical Audit are still available, they should be invited to submit proposal for updating the Audit.*
- 2. The Metallurgical Bill that has been returned to the National Assembly by the Presidency should be revisited and be passed in to law. Amendments can be done as and when due.*
- 3. The Federal Government of Nigeria should expunge all the grey legal issues on Ajaokuta, release funds for its completion so that the sector can help the Government's drive towards job creation and diversification of revenue. At full operation of Ajaokuta it can employ over 500,000 Nigerians both at her upstream and down stream sectors.*

4. *The Ministry of Justice should revisit the Modified Concession Agreement reached between Nigerian Government and GIHL and correct the legal anomalies therein and communicate same to the Ministry of Mines and Steel Development for a lasting synergy to forestall any future misinterpretation of legal documents on the steel sector.*
5. *The National Steel Council Act of 1979 should be dusted and updated to meet current situations in the planning and management of the Steel sector.*
6. *We urge the Ministry of Mines and Steel Development to organize a Metallurgical (Steel) Summit (in line with the Mines and Minerals Conference which was held recently) to fashion out the way forward for the sector.*
7. *There is need for the Government to have a stand alone Ministry of Metallurgy to cater for relevant metals like iron, steel, aluminum, copper, tin, columbite, etc.*
8. *We enjoin the Federal Government, through the Ministry of Mines and Steel Development, to always involve critical stakeholders in the Metallurgical Sector before reaching agreement with any would be investor(s).*

(Signed)

Dr Sanusi Alhaji Mohammed (FNMS, SPX)
Secretary General

(vi) **Engr Adekunle Mokuolu:**

***Iron and Steel Production in Nigeria — A Paradigm Shift in
Policy and Investment Priorities***

I. OBJECTIVES:

This position paper is intended as a supplement to the communique (Attachment A). Our objectives in putting the paper together are threefold. Firstly, it is to direct government's attention to a key area of national potential waiting to be fully tapped. Secondly, it seeks to stress the critical role steel development has to play in overall national development given its enormous potential for socio-economic and technological multiplier effects on economy. Thirdly, it is to serve as an advisory document to guide government in policy formulation.

II. INTRODUCTION

The steel industry of any nation is a basic and core industry. The industry is generally complex, produces a spectrum of products and consumes a myriad of input elements. The steel sector in the developed economies is also the highest employer of labour of all the economic sectors, mainly due to the work multiplier effect and is indeed treated as a STRATEGIC SECTOR. History is yet to record a nation that attained industrial and technological development without first attaining credible steel production capacity. Crude steel is liquid steel produced from liquid iron, which in turn, is produced from iron ore. One of the key indices for measuring economic growth is the per capita consumption of steel and allied products. Currently the apparent per capita Steel consumption in Nigeria is put at 10kg while the world average is at 130Kg.

When the nation's figure of 10Kg with a population of over 170million is compared with the likes of Algeria (42Kg), Egypt (78Kg), Zimbabwe 25kg and South Africa (120kg), one can see the huge gap that needs to be filled. As at today Nigeria ought to be producing over 5 million tons of liquid steel per annum. Unfortunately, the nation is not making up to 0.5 million tones even from the largely scrap melting plants owned by private concerns. Indeed, the developing economies such as India, Brazil, Mexico, South Africa, China, South Korea, Taiwan and Mexico, have since appreciated this reality and embraced the steel Sector as a strategic sector of their economies. Just over a decade ago, Saudi Arabia realized that it was unwise to rely

on U.S. automatic sale of defence armaments to it, and so built its own Ajaokuta type steel plant, in order to manufacture some of its defence needs locally. This implies that the sector can only be ignored at terrible peril to sustainable national growth and national security.

The Nation must therefore deliberately move towards developing her crude steel production base. The Public Steel Sector entities particularly Ajaokuta Steel Plant and the Delta Steel Plant represent the shortest route to achieving a production target of 5.2 million tons of steel per annum by the year 2023. Moreover, Ajaokuta Steel Project can provide up to 500,000 jobs when completed.

Iron and steel industry is a complex and intensive industry in technologies, capital, resources and energy, and its development requires a comprehensive balancing of various scenarios of internal and external conditions.

III. IRON AND STEEL PRODUCTION IN NIGERIA

Nigeria Iron and Steel Industry Historical Perspective

Glancing at our historical past retrospectively reveals that the steel development dream dates back to 1958 at the twilight of the British colonial government. This between 1960 and 1967, the Federal Government invited and received proposals on "the feasibility of establishing an integrated steel plant in Nigeria, from foreign Firms, including those from the United Kingdom, USA, Canada, Germany and USSR.

Between 1970 and 1979 a well-articulated plan steel development was put into effect by the Government of the Federal Republic of Nigeria when it awarded a contract to Tiajpromexport of USSR in 1979 for the establishment of the Ajaokuta Steel plant.

The mission of Steel Plants in Nigeria was a consequence of a well mapped-out strategy to achieve clearly stated objectives which include the provision of a solid industrial base for technological development, the promotion of modern technological transfer and the acquisition, conservation of foreign exchange, export promotion and employment creation.

It was rightly envisaged that both the Automobile Assembly plants and Agro- equipment development would benefit immensely from the Steel plants. As a concrete step towards achieving the stated goals government made investments in the:

- (a) Integrated steel project via the blast furnace process at Ajaokuta which is yet to come on stream after 53 and 98% technical completion stage in 1984 and 1992 respectively
- (b) Second integrated steel plant via the Direct Reduction/Electric Arc Furnace route at Ovwian-Aladja,
- (c) Three Inland Rolling mills at Jos, Katsina and Oshogbo.
- (d) Nigerian Iron Ore Mining Company at Itakpe to provide iron ore to mainly Ajaokuta and Ovwian-Aladja
- (e) Five Automobile Assembly Plants at Ibadan (Leyland), Lagos (Volkswagen), Enugu (Mercedes), Kaduna (Peugeot) and Bauchi (Steyr),
- (f) Aluminum Smelter Plant at Ikot-Abasi also envisaged to be captive to Ajaokuta.

For the Metallurgical Industry, vis a vis the Iron and Steel sector, this was a sound strategic plan for a sustainable industrial take-off for the country. A lot of discipline and commitment was however implicit in the realization of the plan.

The internal and external reasons that are responsible for the seemingly long gestation period of actualizing the goals of Ajaokuta Steel Company (ASCO) cumulated from the Confusion, Controversies and Conspiracies surrounding the national steel development project. This was worsened by local, national and international politics and intelligence coupled with the challenges of corruption, ethnicity, selfishness and unprofessional decisions on National project. The enabling factor that influences the prevalence of these unresolved confusions, planned controversies and deadly conspiracies and consequently the non-realization of steel freedom is the outright reliance except the Governments between 1979 and 1993, on foreign experts to drive our national goal by Nigerian successive governments especially in the iron and steel sectors. The nation had failed to realize that the foreign interests, especially the World Bank/International Monetary Fund were opposed to the development of a conventional integrated crude steel plant in Nigeria, as that would considerably reduce the market penetration of their steel exports.

The Federal Government stopped providing the needed funds for the completion of Ajaokuta Steel project in 1994. This accounts for the various references to the complex as idle, moribund, ailing and comatose after 98 % technical completion status. However, some vital conditions precedent to a successful commissioning and sustainable operation of the complex such as:

- (i) the provision of the outstanding requisite external infrastructure (railways, roads, ports and handling facilities) for bringing in supplementing imported raw materials and evacuating products from the Plant for export;*
- (ii) opening up and development of local mines to assure unfettered availability of relevant raw materials; and*
- (iii) funds for reactivating completed units and completing the balance works of the Steel Plant as at today are unattended to and addressed.*

Since the determination of the Global Contract on the Project in 1979, the Plant, a typically robust Soviet design has come under fierce anti-completion propaganda as a fall out of the East-West cold war and a hangover of contemporary economic re-colonization by the advanced economies.

Strategic Technology Acquisition

It must be borne in mind that we have gone well over the stage of technology selection when the nation had attained more than 90% completion of the selected technology for Ajaokuta. It is a great technical wisdom to allow the chosen technology and its specific brand to be made to subsist, as long as it is still capable of delivering acceptable economic value upon completion and operation. Indeed, through the Ages, the World has tried a total of six alternative processes before and after the advent of the iron Blast Furnace (BF) and Basic Oxygen Furnace (BOF) Ajaokuta type process. All these processes contributed a total of 30% maximum to total World Steel output in the 1960s. The BF - BOF integrated steelmaking, has always been the optimal and dominant technology for crude steelmaking in the World, right from its inception in 1856. Today, over 70% of total World crude steel production is made via the BF - BOF technology of Ajaokuta steel project type, which never changes as stated by UNIDO, World Steel Dynamics. The warning from technical view point is that attempting to change the technology at this stage would be myopic and retrogressive. No other technology is available that can achieve even 60% of Ajaokuta's efficiency and viability. Similarly, it is futile to look for companies to complete the plant at this stage. First, it will take them at least eight months to rummage through the 473,000 blue print designs, drawings, ferret out those that pertain to uncompleted units and reconcile them with the "as built" drawings. Further, they would need over a year to translate the Soviet Standard Specifications (SSS) to their own countries' specifications cost of completion, operation and maintenance, could treble the cost of TPE and partners.

The Nigerian Society of Engineers has the view that Nigeria must continue and intensify the tempo with the steel development in Nigeria in line with the original plan. Only the NATO countries led by the World Bank would dish out the false propaganda that the Blast Furnace (BF)/Basic Oxygen Furnace (BOF) system of steel production adopted by the ASCO is obsolete technology. If it were, it would not be the popular and dominant technology used by all countries today. Moreover, all the five bidders for the project - U.K, USA, Canada, Germany and USSR - proposed the same ASCO technology. They also affirmed the techno-economic feasibility of the project. It is routine propaganda by the World Bank against most third World countries. Although investment is high, yet that factor is cancelled out by its high efficiency and low operating cost per ton of hot metal and not expensive as claimed by the World Bank. The process is an efficient and enduring technology that is employment friendly because of its great potential of generating downstream industries which will benefit the country tremendously. Every nation that developed their economy through the establishment of steel industries began with the BF process and Nigeria's decision for same is therefore not misplaced. No country has even used the fast melt technology in place of BF as recommended by foreign experts. The fast melt or COREX technology is technically and economically viable only for recycling of steel wastes (dusts and sludge). The so called foreign experts are selling their proprietary prototypes, or they are being used by Bretton Woods Institutions as decoys against selected Third World Countries that opt for the BF technology. Furthermore, introduction of additional electrometallurgical processes to the first phase of ASCO requires not only provision of the additional internal infrastructure but also restructuring of the entire internal infrastructure. The cost implication will amount to much more than what is needed to complete the first phase of the steel plant. In any case such a proposal is retrogressive. All such processes are inherently inefficient, because electric arc furnace consumes over eight times the electrical energy used by the steel converter (BOF) and the continuous casting machine put together. The beauty of the Blast Furnace is that it produces its own heat and does not need any electrical energy at all, except for its auxiliary inputs and charging system. That is why it is a continuous process, producing round the clock for over five or six years before it is stopped for relining of its refractory bricks. So, an electrometallurgical unit has no value added to the BF-BOF process. On the contrary, it only results in value and operational efficiency reduction. The BF-BOF process is by far the cheapest way for making large tonnage steel. The argument on the availability of the metallurgical grade coke in Nigeria for the process is not an issue. Extensive research works on the cokability of investigated Nigerian coals abound in various Nigerian universities and research institutes. Specifically, research works from Universities (such as Unilag, OAU, FUTO, etc.), Nigerian Geological Survey Agency, the National Metallurgical Development Centre, and the National Steel Raw Materials Exploration Agency have established the availability of metallurgical grade coals at Lafia-Obi and Lamja in Nasarawa State. Thus, Nigeria coals; contrary to the politicized report of its low metallurgical value can indeed be used for making iron and steel. Nevertheless, the consumption rate of coke in today's BF has drastically reduced (below 400 kg per ton molten iron) which can be sourced externally pending on the development of the country's coal reserves. The NSE advises that all the research efforts on iron and steel (past and present) should be articulated and their findings utilized.

Strategic Formulation of Policy Thrust

Laws and regulations in an organized society provide the most basic institutional framework for action by everybody in such society. If they do not reflect the current socio-economic and technical realities they can act as barriers to the implementation of appropriate actions. And without a proper institutional framework public funds and manpower cannot be effectively and efficiently appropriated. Therefore, the promulgation of an Act that will provide for the regulation and effective monitoring of metallurgical industries in the metal sector, metallurgical inspection and raw materials development in Nigeria is inevitable. The process of policy formulation requires taking informed decisions from experts. It is in this recognition that the Nigerian Society of Engineers (NSE), after examining the Nigeria Metallurgical Industry Bill 2014 drafted by the Federal Ministry of Mines and Steel Development (FMM&SD), restructured the Bill to better reflect the desired objectives of the initial bill and

better position the Country to reap the benefits of sustainable Industrialization. The Executive Bill was restructured to reflect the developmental focus and thrust of the metallurgical industry and better position the country to reap the benefits of sustainable industrialization. This was done because the initial Executive Bill from FMM&SD was generally structured as if the core function of the metallurgical industry is in the investigation of accidents. The issues revolving around the development of metallurgical sector were lumped together and responsibility thereto assigned to the Hon. Minister. These roles and duties were disaggregated according to the development business of the sector, incorporating the existing laws/Acts. The wisdom to avoid hastily passing into law a Bill that would thereafter be beset with series of avoidable amendments informed the NSE to proffer an alternative path to achieving a more enduring purpose. The exercise cumulated into 69 - page Nigeria Metallurgical Industry Bill consisting of nine (9) parts, ninety-five (95) sections and three (3) schedules as against thirty-four (34) pages, six (6) parts, Thirty-three (33) sections, and two (2) schedules of the Executive Bill. Fundamentally the exercise yielded a submission for establishment and/or consolidation of four (4) Agencies, one (1) Commission and one (1) Bureau under the Nigeria Metallurgical Industry Bill to consolidate and strengthen the already existing two Councils, One Commission and two Centers for proper organization/supervision, coordination, regulation/monitoring and development/growth of the sector.

The establishment of these agencies will be at NO EXTRA COST to the Federal Government of Nigeria as these agencies will be derived from the consolidation and strengthening of the existing agencies, Commission and centers associated with metallurgical activities. These include amongst others: (i) The National Steel Council, Act Cap. N76 (No. 60 of 1979); (ii) The National Steel Raw Materials Exploration Act Cap. N6 (No. 49 of 1992), National Metallurgical Development Center Act Cap. No. 60 (No. 50 of 1992), etc. The Executive Bill and the restructured Bill are attached for perusal and comparison (Attachment B and C)

Unfortunately, it was the Executive Bill from FMM&SD that is responsive to pathological concerns of the industry but non-responsive to the issues critical to the development and growth of the industry that was hurriedly passed at the last minute of the 7th National Assembly. Therefore, there is a need to revisit the Bill.

Development of Iron and Steel Industry's Infrastructure

For the emergence of a robust iron and steel sector, a wide approach beginning from raw materials sourcing through the entire value chain development processes to the final end products -iron and steel is needed. This approach is considered preferable in order to overhaul the entire system and to strengthen weak links in the chain, where necessary. Therefore, all structures that are directly or indirectly connected to the present state of the national iron and steel production assets that are currently on ground need to be looked into. This is with a view to making them bring about the desired positive impact on our national economy especially in relation to employment generation and in overdependence in the amount of externally sourced steel materials for national development.

The nation needs therefore to expedite the technical and infrastructure completion of Ajaokuta Steel project as well as the resuscitation of National Iron Ore Mining Company within the context of its commendable effort of diversifying the national economy.

The legacy of Ajaokuta Steel Project assets and infrastructures are at various stages of completion (between 80 to 100% for most units) requiring funding for completion. Conversely, the fully completed concerns such as:

Delta Steel Company has been sold in a contentious process;

Oshogbo and Jos steel rolling mills are under lock and key.

Except Katsina Rolling Mill that is doing well.

External infrastructure required for Ajaokuta Steel Plant is yet to be completed. The outstanding external infrastructure includes:

- Rail lines on Itakpe - Ajaokuta - Warri; Jakura - Ajaokuta and Osara - Itakpe to facilitate the transportation of Iron Ore, limestone and dolomite*
- access road to mines/ rail sidings and inland waterways*
- Rehabilitation of Okene - Ajaokuta dual carriage way*
- Effective waterway (routine dredging of the River Niger) and Provision of bulk materials handling facilities at the ports*

It is pertinent to note that, the above infrastructure is only for Ajaokuta operations but also it is a part of the national transport integrated master plan.

Development Fund for Iron and Steel Industry

Current Status: Funding scheme for development of infrastructure required for both short and long-term development and industrialization goals via the steel sector and to attract more investment to the sector are completely non-existent.

The Delta Steel Company is under receivership by the Asset Management Company of Nigeria over its indebtedness to the tune of about ₦31 billion, to various Nigerian banks. Plant audit is required in order to be able to estimate the funding required for its full plant restoration, since much cannibalization has taken place and is possibly sold to Stallion group but being contested by co-bidder.

Priority areas of work: Completion of Ajaokuta plant and infrastructural development (roads, rails, ports, and power/energy supply) constitutes priority funding option requirement. All the other metallurgical assets have either been privatized to one degree or the other or under receivership. The Government needs to tidy up the process and complete the privatization to reputable company that has the capacity to run the company.

Work Plans: To facilitate financing and for sustainable development of the iron and steel industries and the proposed Agencies and Bureau in the sector, a Steel Development Fund should be established. Detailing of the working mechanisms for some identified funding sources for the priority areas of work should be undertaken by constituted committee(s). Existing and proposed funding sources identified include:

- (a) Policy based finance sourcing from the Federation Account through setting aside at least 4% of the Federation Account (Presidential Directive by President Yar' Adua, 2010);*
- (b) Special Direct Budgetary Provisions which would be escrowed in the CBN.*
- (c) Special Intervention Fund*
- (d) Accessing the accumulated Nigeria Content Development Fund with the CBN for funding the demands of the sector. The fund is estimated to be above 540 million US Dollars at the end of April, 2015 with Central Bank of Nigeria and it is expected to hit 700 million US dollars by the end of the year 2015.*
- (e) Tertiary Education Fund for manpower development of the sector*
- (f) Intervention and Discount rate of the Central Bank of Nigeria*
- (g) Levy on importation of raw or primary input materials, semi-finished and finished*

products that can be found in Nigeria and percentage of the taxes paid by Iron and Steel firms.

- (h) *In addition, other sources such as National Agency for Science and Engineering Infrastructure (NASENI) fund, Raw Materials Development Fund, Non-Oil Natural Resources Development Fund (Act 2002), Solid Mineral Development Fund (Section 37 of the Nigerian Minerals and Mining Act 2007), National Sovereign Wealth Fund, PenCom fund (as accessible loan with low interest rate for steel industry development), Floating of Steel Development Bond, International funding options e.g. African Development Bank; International Finance Corporation; Islamic Development Bank, etc, could equally be explored.*
- (i) *Off Taker Agreement with national and international firms on any infrastructure development*

IV. IRON AND STEEL SECTOR — A STRATEGIC SECTOR OF NATIONAL ECONOMY

It is our ardent conviction that if the Iron and Steel and the allied mining sector is to realize its enormous potentials in the development of the Nigeria nation, it must be set in the context that identifies, prioritizes and pursues the following goals:

- (a) **An Industrialized economy**
The NSE advocates a long-run strategy; comprising a two-pronged approach to the development of the metallurgical (steel) sector namely public sector programme focused on developing infrastructure and regulation of the sector, secondly a private sector steel development programme, and thirdly capacity development programme. These programmes should have defined focus, managed by development agencies and a regulatory commission which will identify, prioritize the key national development issues for sustainable exploitation and harnessing of iron and steel related minerals, materials and products. These, the NSE advocate can be effectively and efficiently organized and managed through the establishment of —
 - (i) *Upstream Metallurgical Enterprises Development Agency that shall be responsible for the promotion of enterprises that produce and/or process raw materials for the manufacture of semi-finished products. These include among others, integrated ferrous and/or non-ferrous metallurgical plants, mini-plants, such as ASCO, DSC, NIOMCO, etc.*
 - (ii) *Downstream Metallurgical Enterprises Development Agency that shall be responsible for enterprises that process semi-finished products for the manufacture of finished products, or enterprises that use the finished products of the upstream sector. These include the rolling mills, foundries, machine shops, fabrication, structural steel, heat treatment*
 - (iii) *Metallurgical Research and Development Agency (for sustainable technology, power and human capacity building) is to coordinate research activities in response to identified problems in the metallurgical sector*
 - (iv) *Metallurgical Regulatory Commission, that shall be responsible for the formulation, implementation, evaluation and regulation of the policy in the metallurgical sector;*
 - (v) *Metallurgical Health, Safety and Environment Bureau, that shall be responsible for the health, safety of the metallurgical processes and workforce as well as compliance with environmental regulations and functions in failure analysis and accident investigations; as well as monitoring the effectiveness of the Metallurgical plants' health, safety and environment program by reviewing accident and incident reports, policies, etc.*

Therefore, the NSE advises that Government should set-up a broad-based committee of key stakeholders such as: professional engineering bodies, representatives from public and private steel sectors, academia, relevant Ministries and Presidency to work out the details of this structure for urgent implementation. *The Nigerian Society of Engineers is well disposed to work with other stakeholders in forging this new framework that will levitate the steel sector and produce a lasting and sustainable impetus for our national technological and socio-economic development. The said committee shall report directly to Mr President.*

(b) **Privatization in the Steel Sector**

The poorly executed privatization processes of the public-sector steel companies without first commercializing them as envisaged when the policy was put in place in 1990, have led to their setback against national expected gains.

Our national experience on the issue of privatization of the Steel Sector has shown that the Sector is not yet mature for privatization. While the two attempts at concessioning Ajaokuta Steel dismally failed to achieve the objectives of the concession agreement, the privatization of the Delta Steel Company (DSC) has not fared any better. DSC is now in controversial litigation under AMCON receivership. Privatization of the Ajaokuta plant will condemn the nation to perpetually expensive and import dependent infrastructural and economic development projects as the investor would not pursue crude steel production but rather sell off the extra facilities meant to enhance our national capacity for industrializing the economy.

With privatization of Government steel outfits such as the Delta Steel Company, Jos, Katsina and Oshogbo Rolling mills already done, the status report indicates that the general business environment for the much-anticipated efficiencies in a privately-run steel operation is non-existent. This makes a case for our advocacy for a two-pronged approach for the Steel Sector development and the establishment of an independent Steel Development Commission or Authority for overall sector development. This structure will result in agility, and pro-activity in sustainably responding to the needs of the Sector.

We recommend that the National Iron Ore Mining Company, Itakpe should be made to run to support existing steel operations such as the Delta Steel Company and others that may spring up to utilize its end product, the beneficiated iron ore. For the nation to realize its original ideals in the public steel sector entities, the Ajaokuta Steel Plant (ASP) requires immediate intervention and Delta Steel Companies' privatization needs to be tidied up. Renegotiating with the original builders (Russian contractors, Tiajpromoexport) will be in the nation's best interest. Indeed, it is the only way out. For example, the original builders of (ASC) can be invited to reactivate the Company and run them for some years over which time it can recoup all or part of the costs involved while the Federal Government pays for the balance and provides the basic external infrastructure. The second option could be the de-regulation of Ajaokuta steel project. The 40 out of 43 completed units of the first phase development of ASP should be unbundled into 6 business/industrial enterprises or units. It would be a mistake and wrong strategy to concession the entire Ajaokuta Steel Complex as a single unit. However, a searchlight into the "intervention" of AMCON is required.

V. **STRATEGY FOR ADVANCING IRON AND STEEL PRODUCTION IN NIGERIA**
Strategy

There is a need for the promulgation of an Act that will provide for the organization, coordination, supervision, regulation, inspection and effective monitoring of metallurgical activities in the iron and steel sector and raw materials development in Nigeria. The Federal Government should enforce the patronage of domestically produced iron and steel products and by-products in line with the Nigerian Content Policy such as inclusion of off-taker agreement in key infrastructure projects of government.

Removal of obstacles mitigating growth and development — Notable existing obstacle in the way of development in the sector such as completion of outstanding units of Ajaokuta plant, completion of Itakpe - Ajaokuta - Warri; Jakura - Ajaokuta and Osara - Tapetail lines, dredging of Escravos estuary and DSC Harbour, major roads in the operational areas etc. should be promptly addressed.

Iron and Steel Development Regulatory Commission — The non-ministerial Independent organ will be responsible for policies' formulation, regulation, inspection and monitoring of the metallurgical activities in the Iron and Steel sector as well as in the raw materials development in Nigeria.

Way Forward

Owing to the strategic nature of steel to the nation's economy as the bedrock for industrialization, and the magnitude of forces against its development in Nigeria and that the Steel Industry is an International Industry, the Federal Government should as a matter of national policy:

- (1) Hold the resurgence of steel as a priority for nation's overall development,
- (2) Not shy away from reacquiring DSC and NIOMCO and then re - positioned it for guided re - privatization. It must be borne in mind that NIOMCO was established as captive to ASCO.
- (3) Set up a broad-based Stakeholders' committee (Taskforce) on Iron and Steel Development. The body to —
 - (i) Forge a new framework for leveraging the steel sector for sustainable impetus to national technological and socio-economic development.
 - (ii) carry out confirmatory Technical Audit to validate and update all the technical audits already conducted on ASCO, DSC and NIOMCO
 - (iii) put in place a concrete and verifiable business plan for ASCO, DSC and NIOMCO to be in operation
 - (iv) establish contact, perform technical audit and negotiate with the original builders, TIAJPROMEXPORT (TPE) now from Russian and Ukraine for the completion of Ajaokuta Steel Project. In our candid view, it is the best way out. For example, the original builders of ASP can be invited to reactivate the Company and run them for some years over which time it can recoup all or part of the costs involved while the Federal Government pays for the balance and provides the basic external infrastructure.
 - (v) As an option to the invitation of TPE (as in (iv) above), the completed units of the first phase development of ASP can be unbundled into business/industrial units concessioned to investors, who are financially and technically competent in the inspectors sectors.
- (4) Show a strong and firm commitment to resuscitation of the sector, demonstrated through:
 - (i) Establishment of Institutional Framework solely responsible for steel production, sector development and growth supervised directly under the Presidency; away from the current Ministry bureaucracy. The Agencies should be charged with planning, implementation and monitoring of all concerns of iron and steel production, similar to Steel Authority of India (SAIL) and SIDERBRAS of Brazil, the defunct National Steel Development

Agency (NSDA) now National Steel Raw Materials Exploration Agency (NSRMEA).

- (ii) Pursue the development of associated external infrastructure, such as, railways, water ways and industrial roads.*
- (iii) Facilitate the exploitation and development of ores and solid minerals associated with steel production*
- (iv) Establishment of "Steel Development Fund".*
- (5) Alternatively, place a metallurgical engineer as an overseeing Minister of Mines and Steel Development.*

Conclusion

In making this humble submission, it is our candid opinion that:

- (1) In view of the strategic importance of steel to national development, Government is invited to consider the position of the NSE as that of an informed and most concerned stakeholder since steel remains the most versatile engineering material. Strategic sectors in other climes are prioritized not out of national convenience but deliberate choice to devote SCARCE resources towards such concerns in order to erect a sustainable future.*
- (2) Government must be wary of negative advices in this regard as such could either be coming from sources that might well be poorly informed on the sector or those with mischievous desire to scuttle the nations greatness and consign Nigeria to a perpetual market for their own steel products.*

Best Regards

(Signed)

Engr Adekunle Mokuolu, FNSE.

President, Nigerian Society of Engineers.

8. Speaker's Concluding Remarks

Mr Speaker thanked the invited speakers who addressed the House on the development of the Iron and Steel sector and the Ajaokuta Steel Company. He reiterated the commitment of the House to follow through the information provided and the necessary legislative actions needed to realize the dream and aspiration of the sector. He pledged the support of the House towards actualization of the productive Iron and Steel sector in Nigeria.

9. Adjournment

That the House do adjourn till Tuesday, 6 March, 2018 at 11.00 a.m. (Hon. Femi Gbajabiamila — House Leader).

The House adjourned accordingly at 3.25 p.m.

Yakubu Dogara
Speaker