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NEWSLETTER

TRANSMISSION COMPANY OF NIGERIA (TCN)

- SGF COMMENDS TCN EXPANSION DRIVE
- EKITI STATE DELEGATION SEEK TCN INTERVENTION
- GE COMMENDS TCN TRANSPARENT PROCUREMENT PROCESS
- TCN WORKS TO AUTOMATE NATIONAL GRID NETWORK

WHAT IS OUR CORE MANDATE IN TCN?

Wheeling electricity at high voltage, from Generation Plants to Distribution Load Centres nationwide, Operate the National Grid and Market Operation Service.

WHAT ARE OUR CORE ACTIVITIES?

✓ Pursue Inter-connection with neighboring countries for power exchange with associated cost savings from the sharing of reserve capacity and energy resources.

✓ Build Transmission Grid that can efficiently evacuate all generated power.

✓ Operate and maintain transmission network for efficient wheeling of electricity generated.

✓ Expand/upgrade transmission infrastructure to meet growing demand for electricity.

✓ Administer coordinated power dispatch to guarantee stable operations of the Grid system.

✓ Administration of the wholesale electricity market in line with provisions of market rules.

✓ Improve TCN's revenue base to ensure a self-sufficient and self-sustaining company.

WHAT ARE OUR MAJOR ACHIEVEMENTS

(1) Developed 20-years Least Cost Transmission Expansion Master Plan to enhance systematic expansion of the grid in the medium and long term.

(2) Increased transmission wheeling capacity from 5,500MW in January 2017, to 8,100MW in December 2018. TCN is therefore capable to move more bulk electricity in the grid.

(3) Evacuated 775 out of 800 containers of power equipment stranded in the ports, some for more than 15 years. These have been used in completing transmission projects across the country.

(4) Commissioned several transmission substations and more than 40 power transformers installed in-house, expanding transmission capacity.

(5) Stabilized system frequency within 49.8 -50.2Hz. For more than 65% of the time since December 2019.

SECRETARY TO THE GOVERNMENT OF THE FEDERATION COMMENDS TCN EXPANSION DRIVE

By Ndidi Mbah

The Secretary to the Government of the Federation, Boss Mustapha has expressed confidence in the ability of TCN to ensure grid capacity expansion to every area of the country which would guarantee adequate bulk electricity supply to Distribution load centers nationwide.

He made the remark when he received the management team of TCN in his office recently in Abuja. Commending TCN's strategy in utilizing in-house capacity in executing projects in the company, he noted that the MD/CEO Mr. Usman Gur Mohammed and his team have demonstrated that locally trained engineers are competent by using them to successfully rehabilitate and build new transmission substations.

According to Boss Mustapha, the lay-out and plan that TCN is currently employing in project execution since the appointment of the current MD/CEO has brought in new lease of life into the company in terms of growth and expansion of the network and adequate power transmission. A more efficient transmission distribution network across the country, would soon have positive impact on job creation and employment.

He expressed the confidence that TCN is on the right path and would be able to achieve much more moving forward.

Speaking earlier, the MD/CEO of TCN Mr. U.G. Mohammed explained efforts the company was making to revamp the system and that the visit was to intimate the SGF on the activities of TCN, efforts made so far to rehabilitate and expand the transmission network.

TCN, he said was poised to move to the next level in grid expansion and stability and aims to be one of the major revenue earners for Nigeria. Usman appreciated the Federal Government for the tremendous effort both in resources and policy environment that has enabled it to achieve that.

The TREP he noted, is a detailed four year plan and forms part of the company's 20 year least cost Transmission Expansion plan. TREP aims at bringing the grid to 20,000MW by 2021.

A group photograph participants at the meeting

TCN WORKS TO AUTOMATE THE NATIONAL GRID NETWORK

By Kazah Bili Akau

As part of efforts to ensure seamless power supply across the country, the Transmission Company of Nigeria (TCN) has taken another step to automate the national grid network with the launching of procurement for the supply and installation of Optic Ground Wire (OPGW) fiber optic cable and universal optical transport network equipment, in a pre-bid opening conference for the procurement held at the TCN Headquarters in Abuja on 10th June, 2019.

(Standing), MD/CEO TCN, Mr. Usman Gur Mohammed, addressing stakeholders

The Managing Director of TCN, Mr. Usman Gur Mohammed, who spoke during the conference said that the project would complete the communication backbone for the installation of a functional Supervisory Control and Data Acquisition (SCADA) System.

He also reiterated that the company had put in place a competitive process of procurement and have also instituted a high level of transparency in its business transactions, assuring contractors of a transparent bidding process in which the lowest evaluated bidder is expected to emerge as winner.

With regards to financing of the project, the TCN boss assured contractors that the project would be funded through the company's Internally Generated Revenue (IGR) and that the fund is already reserved in a dedicated account.

He reiterated the need for distribution companies to make adequate investments in their networks so as to reduce or minimize system failures and damage to transmission equipment.

He harped on the lack of adequate protection on the side of the Discos, stating that "TCN has 737 interfaces with the Discos across the country of which 421 were protected while 316 are not fully protected".

Companies that attended the pre-bid opening include ENERGO, GIZA Systems, Dextron Engineering Ltd, LETSEMA TELECOMMS, North China Power Ltd of China Energy Consulting Group, Xinjiang Power Transmission and Transformer Company Ltd among others.

Ekiti State Commissioner for Infrastructure and Public Utility Hon. Bamidele and MD/CEO TCN, Mr Usman Gur Mohammed

Ekiti State Delegation Seek TCN Intervention for Bulk Power Supply to the State

By Stanford Nneji

A delegation from Ekiti State led by the Commissioner of infrastructure and public utility Hon. Bamidele paid a courtesy visit to management of TCN.

The commissioner lamented the worrisome power situation in the State, which he attributed to inadequate Transmission Infrastructure.

According to him, Ekiti State is being fed through the 132kV transmission line from Oshogbo. The line, he said, is grossly inadequate for the population of 3.5 million. To solve the power situation in the State permanently, there is the urgent need to construct a 330kV substation, which will help to stabilize power in the state. All efforts geared towards the construction of the 330kV substation by previous government proved abortive and hope the new administration of Governor Kayode Fayemi will succeed.

He emphasised the importance of the 330kV project to the Governor and people of Ekiti State and pledged the Governor's support in delivering the project.

In his response, the MD TCN Mr. Usman Gur Mohammed, assured the delegates that plans are underway to source for capital for the construction of 330kV substation in Ekiti State which will help to improve power supply when completed. According to him, "My administration does not embark on project without sourcing for the necessary funds, this is a departure from the previous administration that awards contract without attracting the necessary finances".

Group photograph of participants at the meeting

ISSUES INFORMING THE DECLARATION OF ELIGIBLE CUSTOMER TRANSACTIONS: HOW FAR SO FAR

BY ENGR. EDDY EJE – GENERAL MANAGER (MARKET OPERATIONS)

This write up is aimed at throwing more light on reasons behind the declaration, how it has fared and some observed impediments.

ISSUES:

1. There has been obvious liquidity problem in Nigerian Electricity Market (NEM);

2. The monthly Revenue Posted by the DISCOs is far less than the Market Revenue Requirement, the Gencos and the other operators in the Market being casualties. This ugly trend is a Market issue that urgently calls for a solution.

3. The vision of the Transitional Electricity Market (TEM) is to initiate NEM into a very healthy competitive Market driven by bilateral understanding. In line with the Market Rules, Sect. 15.3.2 and the Market Participation Agreement signed in 2015, the Discos agreed to comply with the operations of the "Security Deposit". The Security Deposit is just the sum of three months average of the Discos typical monthly invoice on both Services and Energy charges. The Security Deposit is a compulsory precondition for all Discos starting from TEM, to be enlisted into the Market Operator's Register as a Market Participant.

4. Given the monthly shortfalls in settling invoices, the Market will have recourse to the Security Deposit so as to make up the shortfall in invoice payment, while the affected Disco replenishes her Security Deposit before the next billing cycle. By so doing, the Gencos would be guaranteed payment while the services Providers: TSP, SO, MO, NERC, NBET and Ancillary Services are equally guaranteed payment of their monthly invoices to enable them operate and sustain the NEM. However, because the Discos resisted recourse to their security deposits, the Market failed.

5. Because this Security Deposit administration was frustrated, the revenue gap cumulatively continued to widen till date. The huge funding gap became embarrassing to the government, hence the continued intervention, starting with N213B. The big question is, when will the government intervention stop and the Market run under the forces of demand and supply as it is done in other developed climes? It may not be wrong, if one claims that inspite of privatization, Electricity as a product is still seen as a social service that must be provided by the government just like national security.

6. Government intervention had never been enjoyed by Service providers in the Market such as the TCN – TSP, SO, MO and Ancillary Services who depend solely on Market revenue for their operations. They do not receive any subvention from anywhere for their operations. The average Market performance is 30%, this means whatever the monthly invoice of TCN only about 30% is received. This 30% suffers "first charge action" with respect to Ancillary Services and whatever remains is prorated among the Service Providers. Equipment maintenance, salaries and all sundry expenses depend on this less-than 30% of invoice receipt. As of April, 2019, the Service Providers are being owed N270b by the Discos starting from 2015 when TEM was declared.

* The Declaration of Eligible Customers operation by the then Hon. MoP,W&H is one of the steps provided for in the EPSR Act 2005 (Sect. 28-29) for the development of Market competition section states that "The Minister may issue a directive to the Commission specifying the Class or classes of End-Use Customers that, from time to time, shall constitute Eligible Customers under this Act."– Sect. 27.
Recall that this declaration was made just like the TEM, neither of them were arbitrarily made, curiously, there are strong indications that some institutions are deliberately sabotaging this stage of the Market but this was not so with the declaration of TEM in 2015.

With illiquidity in the market inspite of government intervention and Discos resistance to making use of their security deposits, it is clear that the Market cannot obviously survive for too long on 30% performance. The Eligible Customer (EC) declaration had to be activated in line with the Market rules.

Observers believe that EC operations started off very well despite the seeming luke-warm attitude from some quarters. One of the aims is to offer a window to ventilate the NEM cash-flow and reduce liquidity squeeze. This is because such transactions are bilaterally driven and invoice is paid 100%. The EC will also remove Discos' oligopoly, encourage Gencos to expand their Capacities as well as create confidence in the minds of prospective investors. And equally present a springboard to bilaterally driven energy sales transactions across the Nigerian borders.

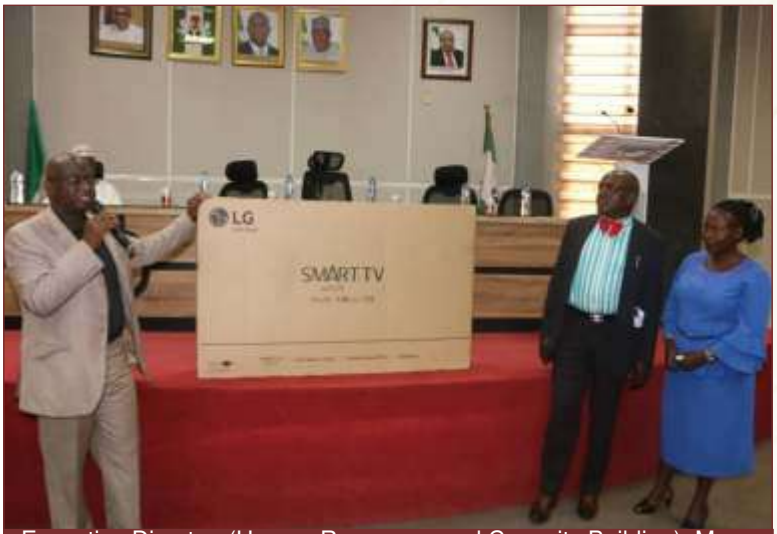
Under the four categories declared, each of which must be able to consume 2Mwh/h and above on monthly bases, there are clauses in Sec. 28-29 that are neither here nor there with respect to Competition Transition Charge (CTC). "----- Decreasing Electricity Prices to such an extent the Trading Licensee or Distribution Licensee would have inadequate revenue to enable payment for its committed expenditures

or unable to earn permitted rates on its ASSETS, despite EFFICIENT management ---- the Minister may direct the Commission to collect Competition Transition Charges (CTC) from the Consumers and Eligible Customers – for a specified period in favour of the Distribution Licensee -----" Now, how do you grapple this?

(a) When the aim of transacting directly with the Genco is to reduce the bulk tariff and any form of surcharging the EC negates the very aim of the declaration;

(b) When the permitted rate is based on the whole disco assets and not stripped or a fraction of the assets.

If one of the revenue requirement is based on the full distribution assets declared, but the actual operation due to poor maintenance or lack of investment is based on half or a fraction of such assets, it means there is asset stripping and the permitted rate on such assets is no longer correct. How can you correctly discriminate this with respect to calculation of CTC? How do you begin to discern efficient management? What strategies would you therefore apply to adjudge a disco efficient in her management? This is not to foreclose the applicability of this volatile clause but I only provoked it as food for thought.



Executive Director, (Human Resources and Capacity Building), Mr. Justin Dodo, presenting gift to Mr and Mrs Moses Adeleye

TORRENTS OF ENCOMIUMS AS MOSES ADELEYE RETIRES FROM TCN AFTER 35 YEARS SERVICE

It was an out-pouring of encomiums and joy as staff of Audit Department and indeed Transmission Company of Nigeria (TCN), celebrated the retirement from service of one of their own, Mr., Moses Adeleye, Manager (Audit).

Speaking at the occasion which took place on Monday, 17th June 2019, at the TCN's Auditorium, Abuja, the Head, ISO, Engr Mamman Lawal described the retiree as a thorough bred professional who maintained high principles in the course of his service to the company.

In his remarks, the Executive Director, (Human Resources and Capacity Building), Mr. Justin Dodo, commended the celebrant on his exhibition of due diligence in carrying out his duties and wished him well in his future endeavors. Even the General Manager, Audit (ISO), Mr, Chuks Ochije described the celebrant as a straight and sincere staff, a detribalised person who performed his work creditably without fear or favour.

Responding, the celebrant, who attended the reception with his wife appreciated God for sparing his life all through his service years in NEPA, PHCN and TCN and also commended his colleagues for their support. He equally encouraged his colleagues to continue to fly the good flag at all times.

Intelligence Officers Call for Effective Power Supply for National Development

By Ogunsakin Oluwole

Officers of the National Defense Intelligence waded into discussions on the need to prioritize effective power supply in Nigeria as a means of achieving sustained national development, during a recently concluded 14-week Advance Intelligence Officers course (ADIOC) 12/2019.

The course themed "Effective Power Generation Transmission and Distribution as catalyst for Nigeria's National Development" held at the Defense Intelligence College Karu, Abuja on May 9th 2019 was attended by 20 officers drawn from various security agencies.

MD/CEO TCN, Mr. Usman Gur Mohammed and Chief of National Defence Intelligence, Vice Marshal M.S Usman

Commending the graduaunts for active participation and attentiveness throughout the training period, The Chief of National Defense Intelligence, Vice Marshall MS Usman urged the officers to continue to work hard towards the peace and development of the nation.

According to the College Commandant, E.C. Ukpong and the Course Coordinator Mr. James Okoli, the graduaunts had the privilege of being addressed by strategic players in the power sector including the former Minister of Power, Works and Housing, Babatunde Raji Fashola; Chairman, Nigerian Electricity Regulatory Commission, Prof James Momoh; the MD/CEO TCN, Mr. U.G. Mohammed as well as MD of Abuja Electricity Distribution Company, AEDC, Mr. Ernest Mupwaya during the period.

Group photo with Graduands

According to one of the course participants, Joy Bisogun, "the course exposed us to the complex system of power Generation, Transmission and Distribution and we now truly appreciate better, the power supply delivery to our homes and offices.

The grandaunts produced a report on their findings during the two-week long intense sessions, and also made recommendations towards achieving sustained national development with effective supply of power as the catalyst.

GM MONITORING & EVALUATION ADVOCATES FOR REGULAR STAFF TRAINING IN TCN

By Gabriel Gandu

(Standing), Acting General Manager, Monitoring and Evaluation (M&E), Engr. Cornelius Asuzu making a presentation

The Acting General Manager, Monitoring and Evaluation (M&E), Transmission Company of Nigeria (TCN) Engr. Cornelius Asuzu has advocated for a more regular staff training to enhance smooth work delivery and high productivity.

Engr Asuzu made the call during a presentation on the activities of the department to TCN management on Thursday, June 20th, 2019, at the Corporate Headquarters, Abuja. He stated that the development of skill sets was key in the growth of any establishment, as such, TCN cannot afford to lag behind in the very important area of training which would aid faster skills transfer.

Engr. Asuzu who commended the efforts of the various Heads of Departments for the timely submission of monthly reports to the M&E department noted that more could be done in collating concise and accurate information and made available within the stipulated period of time to enhance data capturing. Capturing of data and analysis is an integral part of M&E department.

A cross section of participants at the presentation

TCN ENFORCES TRANSPARENCY IN PROCUREMENT PROCESSES

"Our commitment to this project was inspired by the manner in which the project was tendered, this says a lot about the integrity of the process of the MD and his team. I have never seen a procurement process, honestly that was so competitively tendered, openly tendered, very transparent and so we stand here very proud that in such a process we emerged one of the winners"

.....President, General Electric Nigeria, Mr. Lazarus Angbazo

GE COMMENDS TCN'S TRANSPARENT PROCUREMENT PROCESS

The General Electric - Grid Solution (Africa Representative), Mr. Jan Masschelin has commended TCN's transparency in the procurement process for the Abuja Wheeling Scheme, which led to the selection of GE as one of the four contractors to execute the project in Abuja FCT.

Mr. Masschelin made this known during a mission meeting with the GE team, in the office of the MD/CEO TCN, Mr. Usman Gur Mohammed on Tuesday, 18 June 2019.

Speaking on the progress made so far in the project execution, Mr. Masschelin said that supplies have already being ordered and are coming from different parts of the world and assured that the project would be completed as indicated in the agreement.

He expressed GE's interest in participating in more projects in Nigeria, noting that the nation needs about 20gigawats of installed capacity with at least 5-6 gigawats permanently available. This, he further said would require associated expanded transmission capacity.

Mr. Masschelin noted that the Abuja Ring Project is very important to GE, and that the bidding process was very fast, transparent and undertaken within 8months. He expressed GE's resolve to successfully complete the project and to also participate in competitive bidding of other projects whether in Generation or Transmission.

The MD/CEO, Mr. Usman Gur Mohammed advised GE to be efficient and to observe all project quality and execution standards during implementation and affirmed that TCN instituted very competitive and transparent procurement process to ensure that winners of the bid process would have the actual capacity to efficiently implement the project.

He advised GE to observe the project timelines as the project is tied to goals articulated in the company's Transmission Rehabilitation and Expansion Programme (TREP) which is a strategy for Rehabilitation and Expansion of the nation's transmission system to achieve Grid stability and reliability. TREP aims to systematically increase

(L-R), MD/CEO TCN, Mr. Usman Gur Mohammed and General Electric - Grid Solution (Africa Representative), Mr. Jan Masschelin

A cross section of participants at the presentation

COMMUNIQUÉ

issued at the end of the 4th meeting of the Nigerian Electricity Regulatory Commission with Nigerian Electricity Supply Industry stakeholders on May 6, 2019, at the Lagos Continental Hotel, Victoria Island, Lagos.

The 4th Meeting of the Nigerian Electricity Regulatory (NERC) with the Nigerian Electricity Supply Industry (NES!) Stakeholders held on May 6, 2019 at the Lagos Continental Hotel, Victoria Island, Lagos. The licensees and other stakeholders were fully represented at the highest executive management levels.

In his opening remarks, the Chairman of NERC, Prof. James Momoh, summarised key activities of the Commission since the last NESI Stakeholders' Meeting of February 11, 2019. These include the issuance of permits to successful applicants under the MAP regulations and the development of a roadmap and trajectory towards achieving cost recovery and market sustainability.

He also reiterated the Commission's commitment to the development of regulations that advance the growth of the sector and informed stakeholders that the consultation process for regulations on the Capping of Estimated Billing, Distribution Sub-Franchising and Competition Transition Charges were on-going.
He indicated that at the core of the 4th Stakeholder Meeting is the issue of transmission interface challenges with Distribution Companies and the implementation of a framework to address these challenges in the shortest possible time.

Following extensive deliberations on various sector issues and challenges, outcomes and resolutions were as follows:

1. Stakeholders welcomed and were in agreement with the presentation of NERC on its review and findings related to addressing interface challenges and bottlenecks arising from submissions and interactive sessions between the Commission, TCN and the DisCos on the matter. Representatives of DisCos and TCN had the opportunity to provide additional clarity on the content of their respective submissions as reviewed by NERC, as well as affirm their indicated deliverables, projects to be completed, costs and timelines that they respectively have undertaken to meet and achieve the objective.

2. Stakeholders acknowledged the 25 identified general areas of bottlenecks as follows:

i. Distribution Line Limitations & Construction of line towers
ii. Load Limitations.
iii. Poor Voltage profile.
iv. Capacity Limitations
v. Lack of Rehabilitation / Creation of New Feeders to relieve load at other existing feeders.
vi. Reconfiguration and upgrade of feeders to harvest more MW from DisCo networks and improve wheeling, transportation and capacity
vii. Delay in repair and replacement of faulty & damaged MVA Transformers Installation of new transformers already on the plinth
viii. Radiating lines to allow for optimization of various MVA transformers capacity. Splitting of existing feeders into two (2) to enhance flexibility
ix. Swapping of feeders to increase capacity in some locations
x. Encroachment on Right of Way (RoW) and obtaining RoW for electric power project sites
xi. Non-repair of tap changers on Mobitra transformers
xii. Revenue improvement — Poor invoice payment by DisCos to the market
xiii. Wrong use of Auto Re-closers as tool for load management
xiv. Construction of new feeders
xv. Vegetation control
xvi. Perennial rejection of load upon the slightest downpour of rain because of undefined threshold
xvii. Construction of injection substations
xviii. Vandalism and theft of assets by hoodlums leading to insecurity of assets. Construction of lines and Tower Crossing
xix. Underutilisation of transformers available to DisCo franchise areas
xx. Lack of compensation and reactors in the lines
xxi. Undersized cables, weak lines, poles, switchyard, substations etc.
xxii. Lack of adequate investments by DisCos to meet much needed changes and improvement in the networks
xxiii. Lack of communication between TCN & DisCos over growth, needs and challenges.

3. In addition to the detailed report illustrating the specific tasks and deliverables that TCN and DisCos have undertaken to complete within specified timelines, the following were recognised as quick-fixes:

· Low hanging fruits through investments by both DisCos and TCN to improve stability, eliminate load rejection, improve availability of supply, shore up revenue for the sector, facilitate throughput of additional power to the end-user, win back customer confidence, encourage more investors and ultimately rejuvenate economic activities.

· Medium and long term investments needed to increase capacity and improve, stability, allow for flexibility and reliability in quality of supply.
· Poor remittances and unwholesome practices by parties need to be addressed. Efficiency and a sense of responsibility towards national over personal corporate/individual interests have to be curbed. More collaboration and effective/transparent communication has been lacking and must be sustainably forged.

4. The Commission constituted a committee on Interface challenge assessment (comprising staff of the NERC Internal Tactical Unit and other staff of the Commission) to closely monitor, follow- up on implementation and enforce all agreements reached with the Distribution Companies, TCN and other stakeholders on identified DisCo/TCN interface challenges following formal ratification by NERC of the Report. As a follow-up, the Commission will conduct periodic survey on the impact of interventions proposed in the Report on customers, as well as conduct a workshop on voltage stability and investments re-enforcement to ensure and verify appropriateness of the component availability for improved throughout.

5. The Commission in collaboration with all stakeholders is working towards presenting a position of the industry regarding the implementation of the IFRS 9 & 15 with a view to seeking a deferment of the two standards for the industry for now. However, notwithstanding the proposed presentation by the Commission to the Financial Reporting Council of Nigeria (FRCN), all licensees are advised to prepare their 2018 audited financial statements in line with current requirements of the FRCN (i.e. adopting IFRS 9 & 15 effective January 2018).

6. The Commission disagreed with the position advanced by DisCos in support of setting up escrow accounts between DisCos and MAPs for the collection of upfront payments for meters made by customers. To further make its position clear and to monitor the implementation of the MAP Regulations, the Commission directed all Distribution Companies to submit their Meter roll-out Strategy/plan and Meter Order Fulfilment Procedure under the MAP regulations latest by Friday May 10, 2019 for review.

7. Following observations by a large number of DisCos that they had submitted information on all R 1 classes of customers, contrary to the impression that the information is yet to be provided, it was agreed that in order to eliminate any doubt that the information has been submitted, the Head of the NESI Secretariat was required to personally send formal communication to DisCos requesting for the information and follow-up with the DisCos.

8. The Commission noted that after the successful review of the MAP Procurement process and atentative go ahead given to DisCos and their respective MAPs to come back to the Commission to finalize the process, Eko, Kaduna and Kano Distribution Companies are yet to do so. The three (3) DisCos were given until Friday May 10, 2019 to come to the Commission with their successful MAPs to conclude the process.

9. The Distribution Companies were required to step-up in their responsibilities at resolving customer complaints. In this regard they are to exercise enhanced due diligence within stipulated regulatory framework and timelines, as well as improve on their services to underserved and unserved areas in their Franchise areas.

10. The Commission reiterated its concer on the integrity of data submitted by DisCos in respect of customer complaints handling. DisCos were required to be more thorough and diligent with presentation of data, especially in respect of clarity in categorisation of complaints resolved and addressed.

11. The importance of adequate spinning reserve to ensure system stability and reliability at the right price, was acknowledged. In this regard, it was agreed that the System Operator will be invited by the Commission to clarify the approach to be implemented in meeting the challenges identified with provision of spinning reserves, including the cost implications and expected impact and value before the Commission will take a final position on the matter.

12. It was noted that the declining performance of the DisCos with respect to remittance of market invoices is increasingly deteriorating, or at best static. The Commission noted that this is unacceptable. DisCos were in this regard required to step-up by paying amounts due to the MO, NBET and all industry players. In this regard, NERC will soon issue a framework to end discretionary remittance. A one-on-one meeting between the MO, NBET and DisCos will be arranged by the Commission before the next NESI meeting to discuss the low market remittances in order to find solutions that will work for every stakeholder in the market and address this challenge sustainably.

Professor James Momoh
Chairman NERC
Lagos, May 6, 2019

PHOTO PAGE

TCN Management team, paid a courtesy visit to Edo State Government

Kick-off ceremony of the training of 600 TSP engineers on Design, Construction & Maintenance of transmission lines, transformers and power system protection

Chairman, South Energy (Eko Atlantic), Mr Ronald Chagoury and Dir of Operations, Mr Nicolas Rizk in a meeting with TCN Management discussing updates on processes to provide bulk electricity to the Eko Atlantic City in Lagos.

Mrs. Patience Iyoha Jacobs of HR Department (ISO) with her husband during their wedding ceremony in Lagos State

Mrs. Uloma Maureen Osuagwu of Public Affairs Department with her husband during their wedding ceremony in Imo State

ISO TRAINS MORE STAFF IN ITS ENGINEERS' DEVELOPMENT PROGRAMME

By Kazah Bili Akau

The Independent System Operations (ISO), a subsector of the Transmission Company of Nigeria (TCN) recently organized a 2-week training programme for System Operators tagged "Engineers Development Programme", in Osogbo, Osun State.

Speaking during the opening ceremony, the Head, ISO, Engr. Mamman Lawal, who was represented by the General Manager (System Operations), Engr. Nafisat Ali, urged the participating engineers to take advantage of the programme as it would enable them acquire additional skills required to perform excellently and also help prepare them to replace retiring officers in the subsector.

Engr. Lawal encouraged participants to always ask questions and seek clarifications on any cloudy area of the job from the course instructors and their supervisors, adding that TCN was the home of the best power system engineers in Nigeria.

Engr. Nafisat Ali further commended the Head, ISO and the MD, TCN, Mr. Usman Gur Mohammed, for initiating and supporting the programme which she noted would go a long way in bridging the skill gap created by the poor training culture of the past.

The Executive Director (Human Resources and Capacity Building), Justin Dodo, who was also represented by the General Manager (HR&CS), Mr. Chuks Nnaji, said that the training programme, which commenced with batch 1 some months ago has started yielding results.

Mr. Nnaji reminded participants of the importance of acquiring more skills and the need to apply such skill properly noting that their performance will form part of the assessment for the next promotion exercise.

The programme was designed to give more experienced engineers the opportunity to impart knowledge into their newly employed subordinates. Consequently Engineers as well as experienced retirees were invited from different TCN-ISOs formations as facilitators.

Some of the participants that responded were delighted that the TCN management organized the programme and pledged to pay apt attention.

A group photograph of participants at the training

FEEDBACK PAGE

Durowade Najeem @Najmdeen · Jun 9

Replying to @TCN_NIGERIA

Truly there's an urgent need to bridge the infrastructural gap in the industry. We don't get enough power supply, yet power transmitted to all the discos are underutilised.

2

Michael Akanji @mickiebrownkie · Jun 13

The Transmission Rehabilitation Expansion Program, TREP is strengthening the weakest 330kV transmission line corridors through new lines and reconstruction.

Meanwhile, some 330kV/132kV lines will be re-conductored using modern higher carrying capacity conductors.
#TCNPowerUpdate

1 4 3

Norbert Edomah @n_edomah · Jun 7

Replying to @TCN_NIGERIA

Well done @TCN_NIGERIA . Let us all contribute our small quota in building our country. God bless #Nigeria

Alfred Lisiyas @AlfredLisiyas · Jun 17

Replying to @TCN_NIGERIA

Great! I was there January/February. Batch 2.. it was such an impactful training! Wishing all participants best of training.

Habeeb Tunde @habeebtunde2 · Jun 22

Replying to @mickiebrownkie @TCN_NIGERIA and 8 others

Very good.

Only if previous govts had given Power the attention it deserves.

Quick Q: Has the Mambilla power project began? We hardly hear anything about it.
@TCN_NIGERIA

Thank you @MBuhari @ProfOsinbajo @OfficialAPCNg @NGRPresident

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We appreciate your comments, please keep them coming!

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TRANSMISSION TERMS

Demand Factor:
For an electrical system or feeder circuit, this is a ratio of the amount of connected load (in KVA or amperes) that will be operating at the same time to the total amount of connected load on the circuit. An 80% demand factor, for instance, indicates that only 80% of the connected load on a circuit will ever be operating at the same time. Conductor capacity can be based on that amount of load.

Frequency Changers:
A frequency changer is a motor-generator set that changes power of an alternating current system from one frequency to one or more different frequencies, with or without a change in the number of phases, or in voltage.

Grid-connected (Photovoltaic system):
A Photovoltaic system in which the Photovoltaic array acts like a central generating plant, supplying power to the grid.
Grounding Resistors: Grounding Resistors are designed to provide added safety to industrial distribution systems by limiting ground fault current to reasonable levels.

Ground Fault Protection of Equipment:
A system intended to provide protection of equipment from damaging line to ground fault currents by operating to cause a disconnecting means to open all ungrounded conductors of the faulted circuit. This protection is provided at current levels less than those required to protect conductors from damage through the operations of a supply circuit overcurrent device.

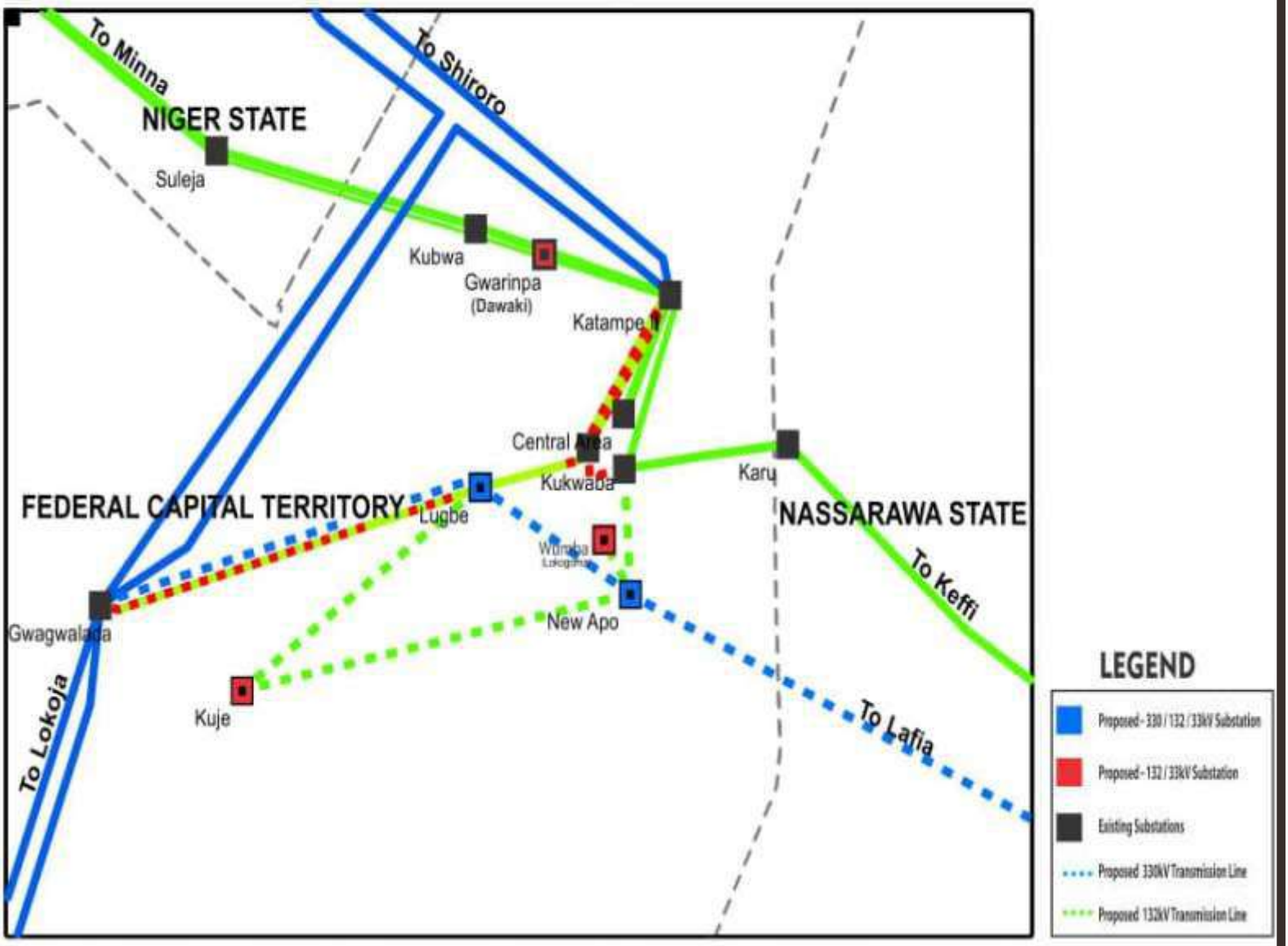
Inductive reactance:
Electrical current produces heat and/or a magnetic field (such as in the windings of a motor). We refer to the tendency for current flow and changes in flow to be influenced by magnetic fields as inductance. An AC circuit that contains only inductance, capacitance or a combination of the two is defined by the total opposition to current flow expressed in reactance. Inductance only affects current flow when the current is changing. Inductance produces a self-induced voltage (called a counter emf) that opposes changes in current. Obviously, the current changes constantly in an AC circuit. Inductance in an AC circuit, therefore, causes a continual opposition. This opposition to current flow is called inductive reactance.

Lightning Arresters:
Lightning arresters are devices for protecting many different pieces of equipment such as, power poles and towers, power transformers, circuit breakers, bus structures, and steel superstructures, from damage from lightning strikes.

Protective Equipment:
Equipment in a distribution system such as protective relays, cutout switches, disconnect switches, lightning arresters, and fuses. These all work in concert to open circuits whenever a short circuit, lightning strikes or other disruptive event occurs.

Voltage Drop:
The loss of voltage between the input to a device and the output from a device due to the internal impedance or resistance of the device. In all electrical systems, the conductors should be sized so that the voltage drop never exceeds 3% for power, heating, and lighting loads or combinations of these. Furthermore, the maximum total voltage drop for conductors for feeders and branch circuits combined should never exceed 5%.

Abuja Feeding Scheme



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