



NEWSLETTER

TRANSMISSION COMPANY OF NIGERIA (TCN)



- **TCN successfully transmits enhanced all-time peak**
- **TCN visits site for proposed second NCC in Abuja**
- **NAPTIN capacity building plans for TCN**

TCN MANAGEMENT VISIT SITE OF PROPOSED SECOND NATIONAL CONTROL CENTER IN ABUJA

By Eric Ene Ephraim

as the Bureau for Public Procurement (BPP), has already issued a Certificate of "No Objection" to TCN for the commencement of work. The MD explained that as a result of the urgency of the project, TCN took the decision not to subject the project to general procurement process rather, it invited selected competent companies who bided for the contract.

According to him, the new Control Center project would have functional Supervisory Control and Data Acquisition (SCADA) and Energy Management System (EMS) as well as modern communication equipment compatible with international standards.

He also noted that the new Control Center project would be completed within 18 months and when completed, it would complement NCC in Osogbo and help forestall breach in the system.



Arising from the need to create redundancy and in anticipation of further expansion of the grid and the power sector in general, the Management of TCN, has disclosed plans to build a second National Control Center in Gwagwalada Area Council of Abuja, the Federal Capital Territory (FCT).

The Acting Managing Director and Chief Executive Officer of TCN, Engr. Sule Abdulaziz made this disclosure when he led some Management staff on a site visit to Gwagwalada Abuja, on Friday, 8th January 2021, for an on the spot assessment of the possible location of the project.

In his words "Our purpose here is to check and see if this site will be suitable for the construction of a second National Control Center like the one we have in Osogbo". Engr Abdulaziz said the civil engineering department of TCN would further assess the site and make recommendations to Management for final approval.

He further disclosed that the contract for the execution of the project would soon be signed





TCN

SUCCESSFULLY TRANSMITS ENHANCED ALL-TIME PEAK

The Transmission Company of Nigeria successfully transmitted all-time peak generation of 5,584.40MW on Thursday, January 7th 2021, at 21:15hrs.

This was 24 hours after the previous peak of 5,552.80MW recorded on Wednesday January 6th, 2021 at 20:15hrs .

This latest all-time peak transmitted, surpasses the last peak generation of 5,552.80MW transmitted by TCN by 31.60MW.

The new peak is an indication of the gradual but consistent growth in the capability of the power sector under the present administration. With the capacity to transmit 8,100MW, TCN successfully transmitted the enhanced peak through the nation's grid at a frequency of 50.08Hz.

The Ag. MD/CEO of TCN, Engr. Sule Abdulaziz encouraged all sector players to work together to ensure sustained improvement in the power sector. TCN he said has continued to build more substations as well as install additional transformers in various substations nationwide. It is also restringing old transmission lines to further increase TCN's capacity to transmit more bulk electricity to Discos nationwide. As at date, he said, TCN is able to efficiently wheel increased generation through the national grid.



NAPTIN PROPOSES CAPACITY BUILDING PLAN FOR TCN

By Stella Ejikonye

The Management of the National Power Training Institute of Nigeria, NAPTIN, has called for more synergy with TCN, in area of capacity building to enhance productivity.

The Director General of NAPTIN, Mr. Ahmed Bolaji Nagode, made this known when he led the management of the company on a courtesy visit to TCN.

According to him, the Agency was out to ensure that industry players fully utilize the potentials of NAPTIN in meeting their goal of

human capacity development. “I remember very well that the Honorable Minister of Power and the Honorable Minister of State for Power, have always enjoined us to work together as agencies under power, to ensure that we collectively utilize our potentials towards realizing the goals and objectives of the power sector” he said.

The institute, he said, has trained about 1,000 staff of TCN in various areas for technical and non-technical between 2019 and 2020, and that reports show that the training positively impacted their jobs.



L-R, Ag MD/CEO, TCN Engr Sule Abdulaziz and DG NAPTIN, Mr Ahmed Nagode



According to him, feedback from TCN showed that they really gained practical experience from the training and that they also do their jobs better. “This kind of feedback he said, is what encourages me to say that there's always the need to build capacity to ensure that TCN delivers more effectively on its mandate”.

Mr. Nagode further explained that NAPTIN as a center of excellence, also trains staff of other power utilities in the African Sub-Region, including the West African Power Pool (WAPP) and assured Management of their readiness to tailor training schemes to fit TCN's capacity building requirement.

Responding, the Ag. MD/CEO, TCN, Engineer Sule Ahmed Abdulaziz, said the visit was strategic, as the current management was in the process of concluding its plan for the year 2021 which is focused on training on specific skills set to further build capacity. He directed the

Human Resources Division to liaise with NAPTIN to properly streamline training for the year.

The Executive Director, Human Resources and Corporate Services at TCN, Barr. Justin Ishaya Dodo, in his response, said that TCN Management is committed to implementing the capacity building policy of the company and assured NAPTIN of TCN's support for structured and impactful training.

Also speaking, the Executive Director, Independent System Operator, Engr. Mamman Lawal, stressed the need for quality training for the power sector and emphasized the need for NAPTIN to liaise with TCN's training department in order to put in place a meaningful programme for the company.



Group photograph of participants at the meeting

THE UTILIZATION OF FACTS IN SOLVING TRANSMISSION NETWORK ISSUES IN NIGERIAN

By Chukwuemeka Chiatula, Dr. Chinda Ibrahim Denis

ABSTRACT

In aiding the disposition of electrical power networks towards controlling and increasing its ability to transfer AC power, Flexible Alternating Current Transmission Systems, FACTS, is generally employed. This paper shows results of the study that assesses the application of FACTS technologies into the expansion plans of the Transmission Company of Nigeria, not as an exclusive solution, but as part of the solution. Load-flow, voltage and economic analysis were carried out and the results obtained show the most suitable alternative to give technical and economic advantages.

BACKGROUND

The Power sector in Nigeria was managed solely by the defunct National Electric Power Authority, NEPA, which metamorphosized into the Power Holding Company of Nigeria (PHCN) in 2005. PHCN was unbundled into three components; the Generation, Transmission and Distribution, premised on the Electric Power Sector Reform Act, 2005.

The Transmission sector has been unbundled to TCN (Transmission Company of Nigeria), and the Distribution sector to eleven (11) regional Distribution companies (DISCOs).

For about three (3) decades there has been little or no significant increase to the available power generation in Nigeria, nor a concrete reinforcement towards expansion of transmission and distribution assets; the result, a radial fragile network and consequent frequent power outages.

INTRODUCTION: In the Nigerian power system, there are some restrictions regarding expansion of the transmission network due to right of way issues and principally, the lack of funds to undertake such projects.

The natural preference for the IPPs is to site their generation plants within close proximity of generation resources and proximity to transmission lines for easy evacuation. These factors work to limit Power generation to the southern part of the country. This is evident in the siting of the bulk of power generation in the southern part of Nigeria while only a small percentage is situated in the North. This is problematic in a country like Nigeria with a land mass area of about 924,000 km² as manifested in the inability of the grid in controlling power to the north due to reactive deficiency, which invariable leads to voltage drops and sometimes collapse in the network. The requirement for better power transfer capability and controllability in the system calls for not only reinforcing of transmission assets and committing new power generation to increase our generation capacity, but to consider technological alternatives such as FACTS that will optimize the already existing transmission infrastructure.

The application of FACTS in the electric system provides a means of governing the operation of transmission systems:

current through line, voltage magnitude, the phase angle, the control of flow of real and reactive power in the transmission line system. The use of FACTS devices develops the transmission capability by improving the dynamic operation stability and reliability. These FACTS devices produce different alternatives in power system planning and optimization.

There are different types of FACTS devices which can be used in a power transmission system depending on the applicability. This paper presents the studies carried out using NEPLAN to demonstrate the use and benefits of FACTS specifically the Unified Power Flow Controller (UPFC) devices in TCN grid system.

Additionally, a brief economic analysis is conducted to show the gains of employing FACTS in the system in comparison to installing of new transmission assets. The only existing compensating equipments in the TCN power grid are capacitor banks and reactors. The tool used for the analysis is the NEPLAN power system tool. The Type of FACTS considered in this study is the UPFC because of its overall attributes as shown in table 1. Table.1 below shows few of the types of FACTS devices and their characteristics.

1. 1793-8198.

R. Adapa, K. Madajewski, R. Jankowski, "Application of Facts technology for Power Flow Control in the Polish Power Grid", Power engineering society Winter Meeting, Vol.3., 2000, pp. 1733-1738

S/N	FACTS Devices	Characteristics
1	Static VAR Compensator (SVC)	Voltage Control, VAR Compensation, Damping of Oscillations
2	Thyristor Controlled Series Reactor	Power Control, Series Impedance Control, Damping of Oscillations & Transient stability
3	Thyristor Controlled Series Capacitor	Power Control Series Impedance controller, Damping of oscillations, Transient stability
4	Static Condenser (STATCON)	Voltage control, VAR compensation, Damping of Oscillations, Transient stability
5.	Unified Power flow controller	Power Control, VAR Compensation, Voltage Control, Phase Angle Control, Damping of Oscillations, Transient Stability.
6.	SSSC	
7	Thyristor Controlled Dynamic Voltage Limiter	Limits Dynamic Overvoltage

Table 1: FACTS types and Applications [1] From the above table can be seen the different FACTS devices and their applicability in the system.

OBJECTIVES FOR THE APPLICATION OF FACTS IN THE TCN 330 kV GRID SYSTEM

The region considered is the Lagos region on the 330kV voltage transmission level. The aim of this research paper is to carry out a study on how the application of FACTS will be beneficial in expansion planning in TCN with the main objective of reducing the requirement for new transmission lines or delay the construction with reducing grid reliability and security.

MODE OF OPERATION OF UNIFIED POWER FLOW CONTROLLER (UPFC)

The UPFC is made up of a shunt voltage source inverter (VSI) Static Synchronous Compensator (STATCOM) and a series voltage source inverter Static Synchronous Series Compensator (SSSC). These two VSI converters are coupled back to back through a DC capacitor [4] which will allow a two-way flow of real power between the SSSC terminals and STATCOM terminals [5]. The series converter (SSSC) exchanges (injects or absorbs) real power at the terminals; this real power is obtained from the transmission line through the shunt controller [5]. The shunt controller, which is connected in parallel to the transmission line by the supply transformer, [6] controls the voltage by reactive power injection thereby making the UPFC a multi-purpose FACTS device which controls real and reactive power as well as control of voltage of the transmission line.

STATCOM and SSSC are connected to the ac transmission line via transformers and coupled to a DC capacitor link back to back. This is shown in figure 1 below.

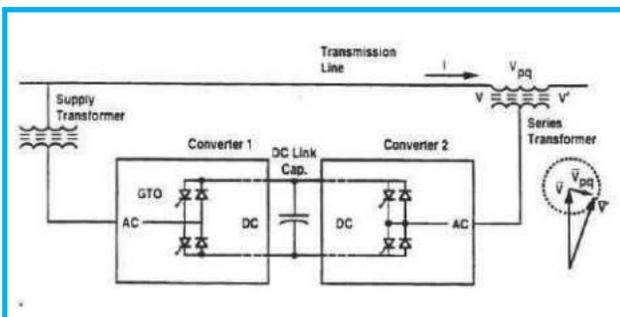


Figure 1: Schematic Diagram of Unified Power Flow Controller (UPFC)[1]

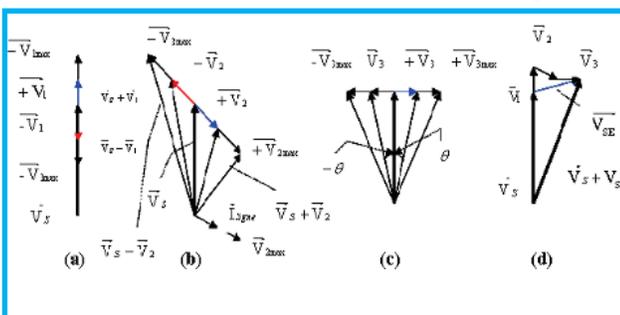


Figure 2: Voltage injection in series (Phasor diagrams) [6]

The SSSC part of the UPFC has the active and reactive power flow capabilities by the injection of the voltage phasor of the right magnitude of voltage and the phase angle to the sending end voltage phasor [6]

As figure 2 shows, the choice of phasor of Voltage will give the three power flow control functions:

1. Regulation of Voltage
2. Series reactive compensation
3. Phase Shift

The STATCOM main function is to absorb or supply the real power demanded by the SSSC at the common DC link to support the real power exchange resulting from the series injection; this can supply shunt reactive compensation. Both compensators are able to independently provide and absorb reactive power.

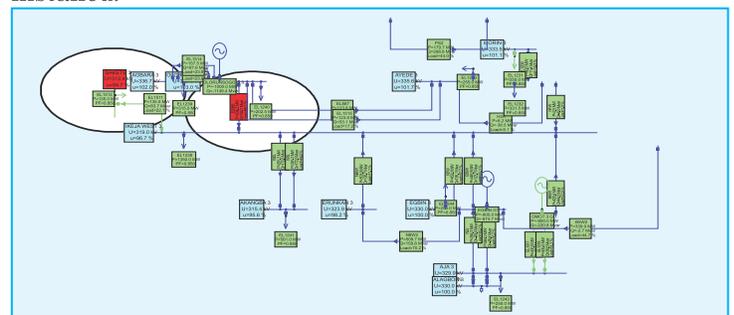
One other UPFC capability is the decrease in power loss, where two methods are proposed. The first method is to boost the transmission power in a line of low impedance, which is implemented by injecting series voltage in phase with the sending voltage. The flaw of this method is that the increase in transmission power is proportional to the increase in size of UPFC which will incur more cost. The second method is to decrease the transmission power in high impedance lines. The inverse series voltage should be inserted in the line with respect to the voltage of the sending bus. The most economical means is to install UPFC in the lines with high impedance that are usually long lines. [4]

MODEL SIMULATION OF UPFC APPLICATION ON THE 330KV ON THE WEST OF TCN GRID SYSTEM

The NEPLAN case will show 3 scenarios;

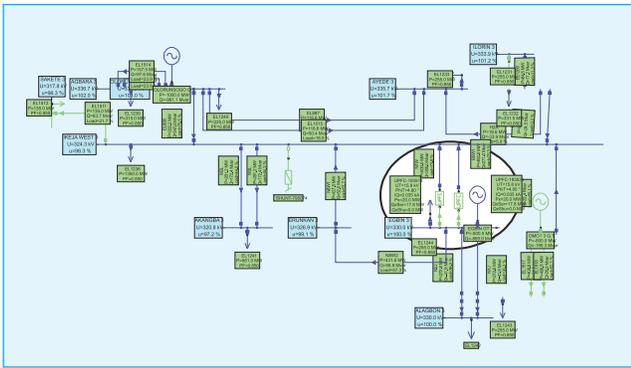
1. Case A: Without UPFC device and new transmission assets
2. Case B: Installed UPFC device
3. Case C: Installed new Transmission Assets (Lines, Fixed shunt)

The use of UPFC devices is employed in the South-West area of Nigeria which is more highlighted as Lagos region. (Note: scenario increase in load at Ikeja west 330KV busbar). Egbin generation busbar is connected to Ikeja west 330Kv busbar which is feeding Sakete, Osogbo, Olorunshogo, Omotosho and Akangba 330 kV busbar. A projected increase in load was determined at Ikeja West 330kV busbar to show the stress point on the Lagos region network. See diagram below showing the network without new transmission assets and UPFC device installed.

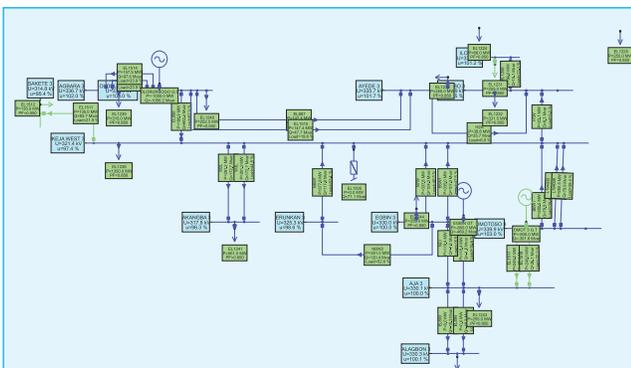


Power System Network 1: Lagos region, without newlines or UPFC.

The diagram below shows where UPFC was installed and the effects to the network was highlighted showing the de-loaded lines and the increase in voltage on the Sakete busbar.

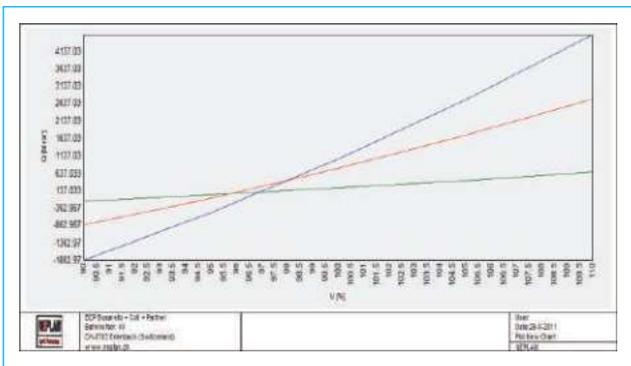


Power System Network2: Lagos region, with UPFC
The diagram below shows the scenario of third option of installing new transmission assets which are 3 lines and SVC



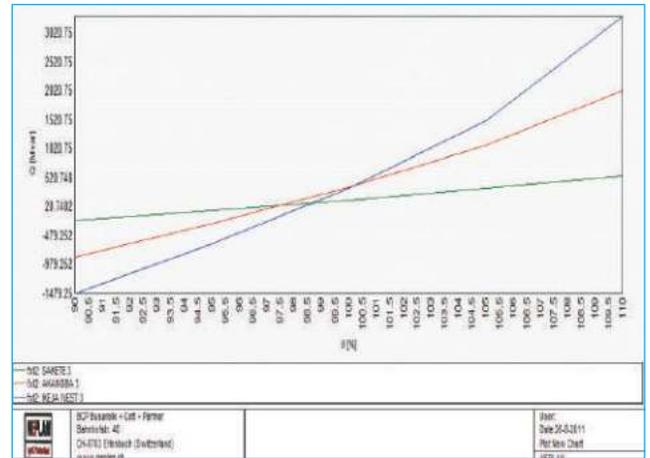
Power System Network 3: Lagos with new transmission lines
VOLTAGE STABILITY ANALYSIS
CASE A

In case A, it can be seen with the projected increase in load shows the overload of line EL888 from Olorunsogo to Ikeja West and also increase voltage instability in Sakete.



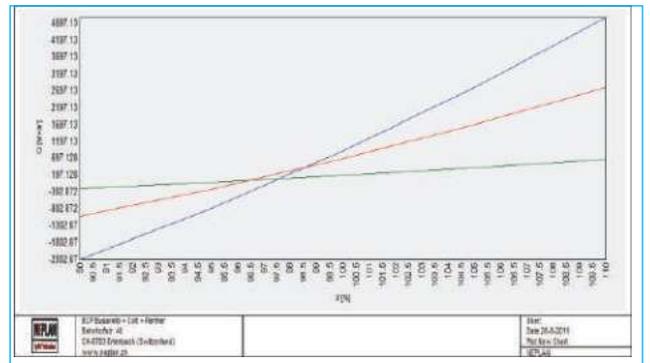
V-Q Result 1: without UPFC and New transmission line
CASE B

In case B, the installation of two UPFC devices from Egbin to Ikeja west will deload the line EL888 from Olorunsogo to Ikeja west and the increase in voltage stability in Sakete.



V-Q Result 2: with UPFC
CASE C

In case C, the installation and reinforcement of two lines and SVC will de-load the line EL888 from Olorunsogo to Ikeja West and increase the voltage stability in Sakete.



V-Q Result 3: with New transmission lines
ECONOMIC ANALYSIS

To be able to justify the option of using FACTS devices in our system as part of expansion in planning, a cost benefit analysis is carried out showing the costs of reinforcement of lines and instalment of SVC in Case C compared with the installation of two UPFC devices in Case B. Note: The cost data obtained are provided by the Planning department of TCN database for transmission line and substation costs. The estimated cost data for the UPFC is obtained from EPRI reports regarding FACTS application

1. Case C:

For Case C, the following investments are made showing the installed transmission assets:
Exchange rate as at timing of study; N150= 1USD

to be continued in the next edition



MOTHER HEN'S STRATEGY TO HELP GUARD AGAINST SEXUAL ABUSE IN CHILDREN

Parents have to guard their children against sexual abuse like the Mother Hen, the hen is the female chicken commonly domesticated by humans and reared in farms for its economic purpose as poultry. The hen produces eggs, which she incubates for about 21 days before hatching to chicks. While in this process, she denies herself a lot, economises her movement and eats less as a result, just to achieve her goal. If she doesn't do this, her eggs may not hatch or may get stolen or eaten by predators.

When her chicks finally hatch she becomes very aggressive in the care of them, searching for food for them and protecting her young from danger fiercely. Other attributes of the mother hen worthy of emulation are planning, discipline, sacrifice, generosity, faith, hope, patience sensitivity, decisiveness, wisdom, being realistic, having strong love, unity and mentorship.

If you've ever seen a mother hen in action against a hawk trying to pick her chicks then you can understand

better. As a little girl I always ran away from mother hens because my mother used to tell me in Yoruba language "ma je ki adiye olomo yo oju e je" meaning don't allow the mother hen pluck out your eyes. That goes to show how far the mother hen would go to protect her young.

Child sexual abuse according to Google is any sexual activity between adults and minors when one forces it on the other. This includes sexual touching acts like exhibitionism, exposure to pornography, photography of a child for sexual gratification, solicitation of a child for prostitution, voyeurism and communication in sexual ways on phone, internet or face-to-face.

Researchers cannot specify the actual rate of child sexual abuse as many victims do not disclose or report their abuse but suggested that rates vary from 1% to 35%. (Google)

I am sure many of us will remember the story of Ochanyan Ogbaje, the

13-year-old Benue State indigene who in her quest for quality education had to relocate to her aunts' place only to meet her death as a result of repeated sexual abuses she suffered in the hands of her aunt's husband and son. Ochanyan was being molested right from the age of eight when she moved in with them by both father and son, she eventually started falling sick, lost control of her excretory system as she was stooling and urinating on her body. She was on a diaper, lost her speech, could not stand, and lost a lot of weight, before she eventually died.

That is one of the few stories about sexual abuses that was reported, there are countless other cases of sexual abuses that are not reported. Some result in unwanted pregnancies like that of the 10-year-old that happened in one of our IDP camps sometime last year. Some lose their wombs due to infections and other complications and trauma.

Some guidelines that will be of help curtail sexual abuse in children or

even nip it in the bud are:

- Parents should be careful of who they leave their children with, because no one can be trusted.

- Give your children sex education from early ages, dangers of sexual abuse, prevention and what to do in case they find themselves in sexually abusive situations.

- Be friends with your children so that they can open up to you easily when they have negative issues affecting them.

- Children with home tutors should not be left alone with those teachers, there should be close monitoring from parents in this case.

- If you can afford it as a parent, it is

advisable for your male and female children to have separate rooms.

- Monitor your children's usage of mobile phones, internet facilities and other modern gadgets.

- Monitor your children when they attend birthday parties and other parties, and be careful when sending your children to friends and family members on holidays.

- Monitor how your children dress up at all times, be mindful of the type of movies, cartoons and music they watch, and listen to as they would want to graduate what they see and hear.

- Be careful not to behave sexually around your children, and also watch your mode of dressing, because they emulate us.

- Watch the kind of friends your children move around with, and above all teach your children the word of God.

In conclusion, children should be watched closely around uncles, aunties, neighbors etc as most sexual abuses are perpetrated by close relatives, friends, aunts and neighbors.

Like I said in the opening, parents, especially "mama's", must watch their children closely like the mother hen. May God save our little bundles of joy from perverts' individuals that abound in our society today. Growing up as a home child, sexual abuse was almost unheard of as everybody looked out for their neighbors' children. May God heal the world. Amen.

Ponders!!!! Two Minutes Management Course (Worth millions of Naira)

LESSON ONE.

An eagle was sitting on a tree resting, doing nothing.

A small rabbit saw the eagle and asked him, "Can I also sit like you and do nothing?"

The eagle answered: "Sure, why not."

So, the rabbit sat on the ground below the eagle and rested. All of a sudden, a fox appeared, jumped on the rabbit, and ate it.

Management Lesson

To be sitting doing nothing, you must be sitting very, very high up.

LESSON TWO.

A turkey was chatting with a bull. "I would love to be able to get to the top of that tree," sighed the turkey, "but I haven't got the energy."

"Well, why don't you nibble on some

of my droppings?" replied the bull.

"They're packed with nutrients."

The turkey pecked at a lump of dung, and found it actually gave him enough strength to reach the lowest branch of the tree. The next day, after eating some more dung, he reached the second branch. Finally after a fourth night, the turkey was proudly perched at the top of the tree.

He was promptly spotted by a farmer, who shot him out of the tree.

Management Lesson

Bullshit might get you to the top, but it won't keep you there.

LESSON THREE.

A little bird was flying south for the winter. It was so cold; the bird froze and fell to the ground into a large field.

While he was lying there, a cow came by and dropped some dung on him. As the frozen bird lay there in the pile of cow dung, he began to realise how warm he was.

The dung was actually thawing him out!

He lay there all warm and happy, and soon began to sing for joy.

A passing cat heard the bird singing and came to investigate. Following the sound, the cat discovered the bird under the pile of cow dung, and promptly dug him out and ate him.

Management Lessons

(1) Not everyone who shits on you is your enemy.

(2) Not everyone who gets you out of shit is your friend.

(3) And when you're in deep shit, it's best to keep your mouth shut!

SLEEP; NATURE'S VITAL HELPER



Sleep is one of the most important things you can do to take care of your health. Sleep can be ranked with eating organic healthy food and getting regular exercise. Hormone changes, stress, lack of exercise and other lifestyle factors can totally interfere with sleep.

Accidents

Lack of sleep is a huge public safety hazard every day on the road. Drowsiness can slow reaction time as much as driving drunk. The National Highway Traffic Safety Administration estimates that sleepiness is related to over 100,000 auto crashes with 1,550 sleep-related deaths a year in the United States alone. Sleepy workers are 70 percent more likely to be involved in accidents and workers with chronic insomnia are far more likely to report industrial accidents or injuries.

Deadly Medical Errors

The Institute of Medicine's report estimates that as many as 98,000 deaths occur per year in the United States'

hospitals due to medical errors. Long work hours and patient overload among hospital workers contribute to this serious problem

Mental Dysfunction

Sleep loss actually affects your thought processes, making you more forgetful, clouding your judgment, and making it harder to comprehend information. It also causes irritability, moodiness, depression and excess anxiety.

Studies show people who are sleep deprived report increase in negative mood and decrease in positive mood. Lack of sleep can also trigger hallucination and manic episodes in those with bipolar disorder among other psychological risks.

Chronic Disease

Lack of sleep actually makes you more at risk for heart disease, high blood pressure, stroke, diabetes, kidney disease and obesity. And a recent European Heart Journal Study showed that those people getting less than 7-8 hours of sleep at night had a 35 percent higher chance of cardiovascular disease and strokes.

Hormone Production

Sleep is vital for growth hormone production which is necessary for building muscle, repairing cells and rebuilding tissue and collagen production. For testosterone production, you need at least three hours of uninterrupted sleep, not sleeping enough depletes hormone production.

Poor Immune Function

During sleep, the immune system releases a type of protective protein called cytokines. Cytokines are a line of defense that is needed to fight off infection or inflammation, or during times of stress. Sleep deprivation decreases these protective cytokines and infection-fighting antibodies, making it difficult for the body to fight off any infectious illnesses.

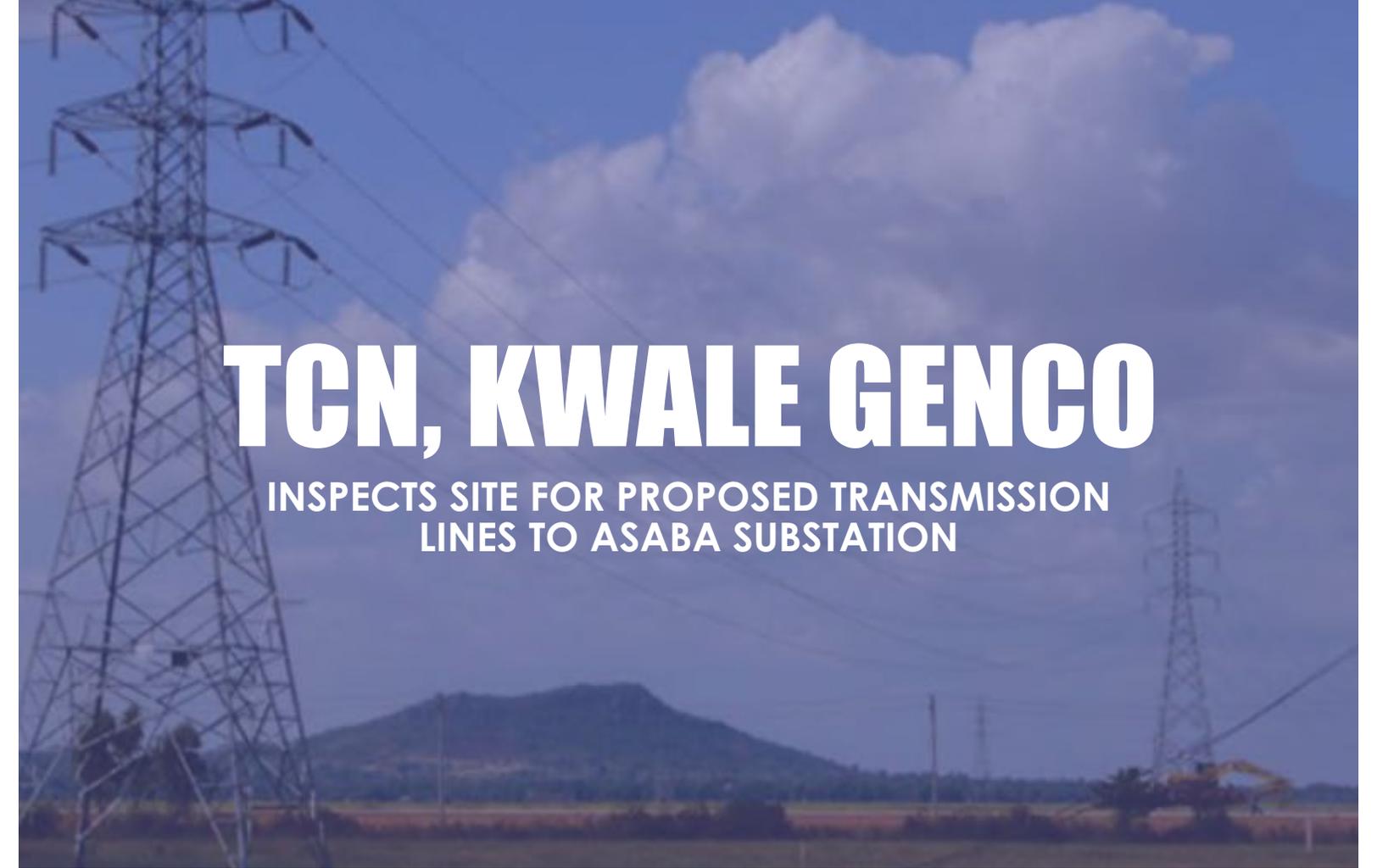
Out of Control Appetite

Sleep deficiency actually creates a higher than normal blood sugar level, causing more insulin to be released. This causes appetite to go up causing hunger and weight gain.

Accelerates Aging

Sleep deprivation can cause your skin to age faster. Poor sleepers show definite signs of aging skin and decrease in their skin's ability to recover from sun exposure; Watch the Caffeine in your drinks, food or medications and drink plenty of water.

So what are you waiting for? Go get some sound sleep!!!



TCN, KWALE GENCO

INSPECTS SITE FOR PROPOSED TRANSMISSION LINES TO ASABA SUBSTATION

By Mary Philips -Udom

The Transmission Company of Nigeria (TCN), has inspected the proposed site for two (2) number 330kV Double Circuit transmission lines for power evacuation with Kwale Genco Limited (KGL).

The site inspection, which was at the instance of the KGL, an Independent Power Plant, and the Nigerian Gas Company Limited (NGC) a subsidiary of Nigeria National Petroleum Corporation (NNPC), was carried out on Wednesday, 14th October 2020, at Asaba 330/132/33kV Substation, Delta State.

The Head (Engineering) KGL, Mr. Arun Nagarajan, said the inspection was to explore the most suitable and safest way for the proposed transmission line entry point, which will help them prepare the design and

engineering template for the 64km, 330kV DC transmission lines, to ascertain the final termination at Asaba Substation.

The TCN team led by Engr. Izah Musa who represented the General Manager (Engineering) TCN Headquarters, Engr. Geoffrey Nwokoye, applauded KGL for the initiative and urged them to ensure strict compliance with TCN's technical standard and specifications. He further advised them to submit all designs to TCN for vetting and approval before embarking on any construction activities at the site. This is to avoid future dispute or disturbance by the communities in the course of construction.

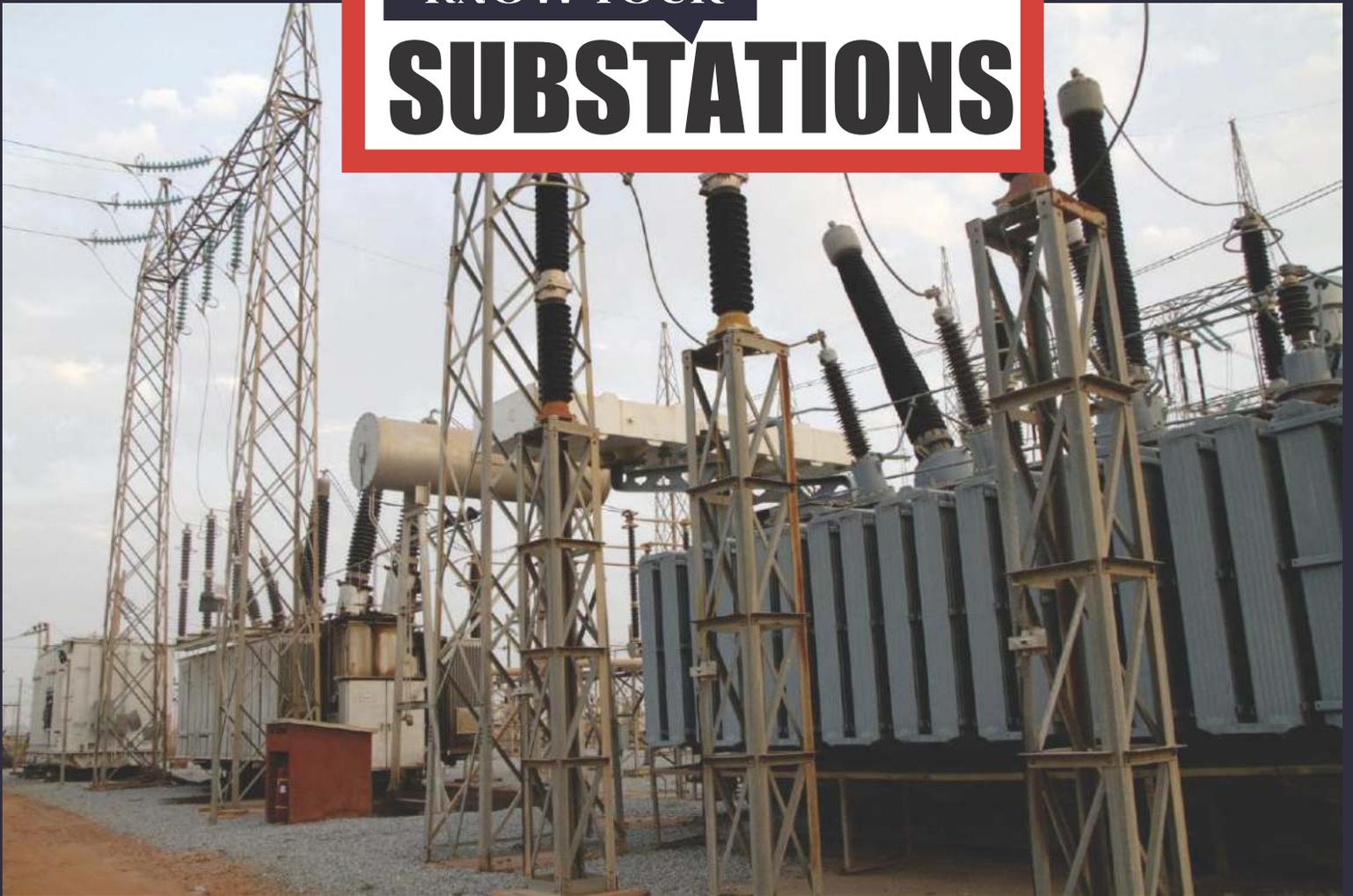
The Regional Transmission Manager, Enugu Region, Engr.

Emmanuel Nwani, on his part, noted that the proposed substation projects would contribute significantly to TCN's wheeling capacity.

Responding, the Head (Engineering) KGL, Mr Arun Nagarajan, expressed appreciation to TCN Management for their support and promised that KGL will execute the construction of the project according to TCN project standard and specifications and deliver it within 24 months.

The construction of the 2 No 330kV Feeder Lines Bay from Kwale Genco IPP Sub Station would terminate at Asaba 330kV Transmission Substation. The climax of the occasion was the signing and handing over of the project document to Kwale Genco IPP Ltd.

KNOW YOUR SUBSTATIONS



Kumbotso TRANSMISSION SUBSTATION, KANO STATE

BACKGROUND

Kumbotso Transmission Substation had four number 150MVA transformers feeding Kano, Jigawa, Katsina, part of Bauchi and Yobe State as well as an international line to Niger Republic. In 2019, TCN lost one of the 150MVA power transformers, causing load suppression which affected bulk supply to some distribution feeders.

SCOPE OF PROJECT

The installation of a brand new 150MVA,

330/132/34.5kV power transformer with associated accessories to replace the lost transformer using TCN engineers.

IMPACT OF THE PROJECT

The new 150MVA, 330/132/34.5kV power transformer would increase the substation's capacity by 120MW, this would take care of the suppressed load caused by the earlier transformer loss in the substation and also increased TCN's grid capacity.

PHOTO PAGE



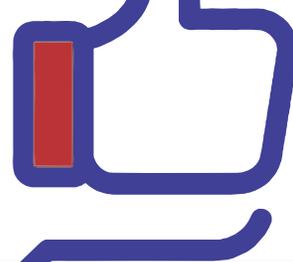
Second top Management retreat for Heads of Departments and Chief Executive Officers of Agencies under the Federal Ministry of Power in Lagos, titled "Team Work for Optimal Productivity"



The Hon. Minister of Power, Engr Sale Mamman, addressing staff of the National Control Center(NCC), during his maiden visit to assess the state of facilities at NCC, appraise the strides made thus far in grid management as well as get acquainted with challenges encountered



FEEDBACK PAGE



Transmission Company of Nigeria

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NAPTIN Management, led by the DG Mr Nagode, paid a courtesy visit to the MD/CEO of TCN to discuss TCN's capacity building plan and solicit for training of TCN staff in the year 2021



Aduson Paul
Capacity building is key to the development of the nation power industry.

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TCNNIGERIA
@TCN_NIGERIA

@TCN_NIGERIA again successfully transmits another all-time peak



EssGee @abuhanaaaan · Jan 7

Replying to @TCN_NIGERIA

Congratulations to all involved. May your commitment and patriotism yield more. There is still room for improvement. Thank you for your sacrifices for our comfort.



Abubakar Ahmed Kawu @habu50 · Jan 9

Replying to @TCN_NIGERIA

Congratulations TCN indeed we are moving forward



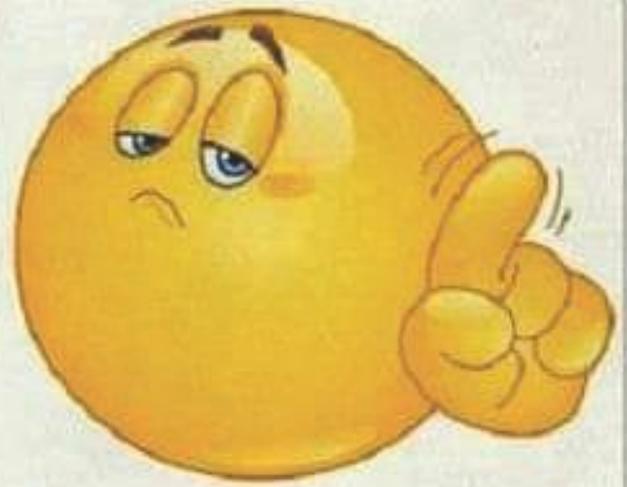
Top fan

Isah Aliyu

We hope by December,2021 you should be able to transmit 7000Mw to the National grid.Congratulations for the new feat

Like · Reply · Message · 2 w

Keep your distance from people who will **never admit** they are wrong and always try to make you feel like it's **all your fault.**



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