- DPR unveils Minimum Industry Safety Training for Downstream Operations (MISTDO)
- Nigerian Gas Flare Commercialization Programme Bidders Conference





Nigerian Oil & Gas Industry Annual Report **Available for download on DPR Website:** www.dpr.gov.ng



Department of Petroleum Resources

Vision Statement

"To be a leading R.E.G.U.L.A.T.O.R in the Oil and Gas Sector."

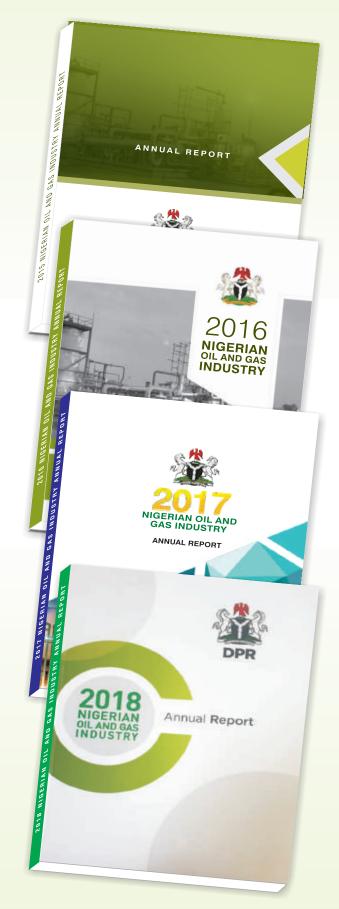
Mission Statement

"To ensure the sustainable development of Nigeria's Oil and Gas resources across the value chain for our stakeholders through effective regulation, while entrenching world class professionalism, accountability and transparency"

Our Core Values

- R espectfully responsive
- **E** xcellence with integrity
- G lobal perspective
- U nderstanding stakeholders expectations
- Leadership & professionalism
- **A** ccountability
- T ransparency
- O wnership
- R esponsible and resilient

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Dear colleagues,

Welcome to another exciting edition of our sizzling newsletter-'DPR News' in year 2020.

As always, it is a bumper package with incisive reports and well researched articles for your reading pleasure.

Let me express our gratitude to the

Editorial

Petroleum Resources, Chief Timipre Sylva for the recent launch of the much-awaited Nigeria Gas Transportation Network Code (NGTNC), a protocol that governs the operations of gas network players. The project will further complement government's aspiration to open the gas space as a major revenue earner for Nigeria. This is in furtherance of the Honourable Minister's declaration of year 2020 as the 'Year of Gas'.

Also, the Director/CEO, DPR Engr. Sarki Auwalu has continued to deepen stakeholders understanding of our regulatory mandate by hosting various stakeholders' engagements like Minimum

Honourable Minister of State Industry Safety Training for Petroleum Resources, Chief Downstream Operations Timipre Sylva for the recent launch of the much-awaited Nigeria Gas Gas Flare Commercialisation Transportation Network Code Programme (NGFCP) bidders (NGTNC), a protocol that governs Conference etc.

All these and other activities like commissioning of DPR Calabar field office laboratory for the effective monitoring of quality of petroleum products in Cross Rivers State and its environs are featured in this edition. We are not leaving out our staff who have graduated to senior citizens through retirement. We wish them well in this new phase.

As always, please enjoy this bumper package!!!

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Public Affairs Unit

SENATE COMMITTEE ON ICT AND CYBERCRIME VIS HE DEPARTMENT OF PETROLEUM RESOURCES (DPR)

By Dalhat Hassan Dalhat, Public Affairs Unit, Lagos Harts.

epartment of Petroleum Resources (DPR) hosted the Senate Committee on ICT and Cybercrime who were on a working visit to the Department.

The Director/CEO of DPR Engr. Sarki Auwalu MNSE who was represented by the Head of Engineering and Standards Division, Mrs Ibidun Toweh in his opening remarks expressed the delight of DPR management for the oversight visit and assured the delegation of DPR's readiness to collaborate with the legislature in achieving national goals.

The Committee Chairman, Senator Yakubu Oseni in his presentation said that the dynamics of today's global technology space has made it mandatory to align public institutions with all regulatory requirements for cyber security.

According to him, this development is without challenges. Cybercrime is a

menace bedevilling Nigeria and the entire world. He said DPR as the Regulator of the oil and gas industry is very important to the Nigerian economy, hence the need for the oversight visit.

The Chairman explained that the Senate Committee on ICT and Cybercrime was created by the 8th Senate based on the need to ensure the Nigerian ICT space align with the world of Information and Communication Technology and the promotion of cyber security. He said training is one of the windows for accessing new knowledge and the senate would do its best to ensure proper support in this area.

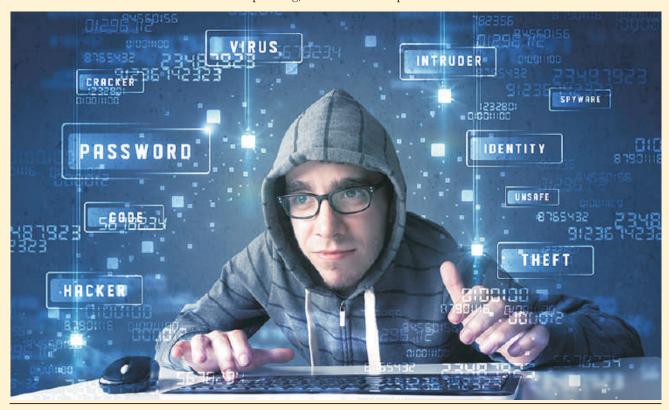
A presentation titled; "DPR Strategic Approach to Addressing Cyber Security Challenges and Safeguarding Our Digital Ecosystem." was delivered by Assistant Director ICT, Mrs. Sholabi

Responding, the Senators expressed



satisfaction at DPRs' attainment in cybersecurity and manpower development and reiterated their readiness to give the Department more support.

High point of the visit was a tour of the National Production Monitoring System (NPMS) and Crude Oil/LNG (COLT) control centre were detailed presentation on Nigeria's real time crude oil and other Petroleum products tracking technology was displayed to the admiration of the team.



NIGERIA GAS TRANSPORTATION NETWORK CODE (NGTNC) AT A GLANCE

By Abel Nsa, Assistant Director, Upstream Division, DPR.

he Nigeria Gas Transportation Network Code is a set of rule and protocol that govern the operation(s) of the Network Players [Transporter(s), Shippers, Suppliers and Agents].

The Network Code scope covers the Escravos-Lagos Pipeline System, Oben-Ajaokuta pipeline system,

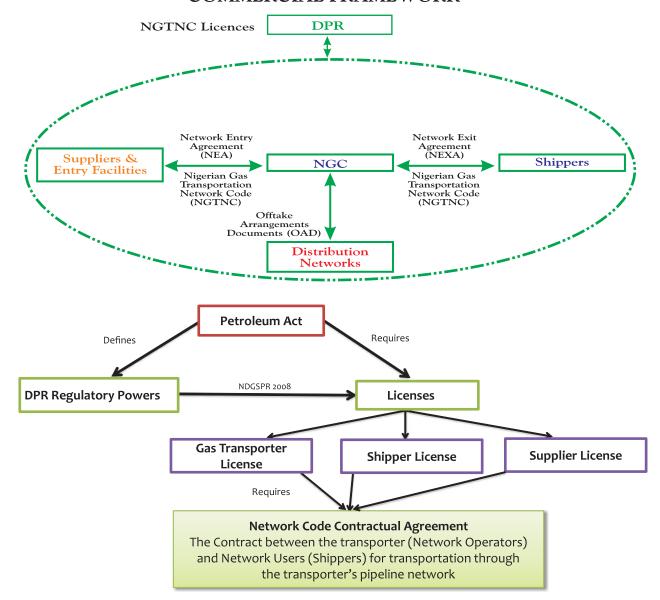
Obiafu/Obrikom-Oben pipeline system and all other pipeline systems that may be in existence or constructed in future and used to transport Gas to Shippers*.

Rules and protocols governing NGFCP are:

- Statutory Licenses
- Ancillary Agreements
- Business Process Documents



COMMERCIAL FRAMEWORK



Key Regulatory Principles: Transparency, Consistency & Predictability

THE EFFECTS OF KNOWLEDGE MANAGEMENT **IN ORGANIZATIONAL PERFORMANCE**

By Elochukwu Emefo, DPR Umuahia

nowledge is all about information, fact and skill about a subject acquired through experience or education.

Knowledge is the determinant factor that obviously separates human race from the animals. Knowledge has enabled man to make all the advancements in the science and technology spheres that we have been able to attain. Knowledge has helped human race far more capable, superior and sophisticated beings on this earth.

Human has the power to judge situations decide between what is good and what is bad and make decisions voluntarily. Since knowledge is the fuel that drives human life, gaining knowledge is deemed the most primary activity that prepares man for a long and successful life, it, therefore suffices to say that knowledge is the most dynamic force driving the development of any society.

Knowledge Management

To any forward-looking organization, knowledge is the key resource in intelligent decision-making, forecasting, design, planning, diagnosis, analysis and evaluation. Knowledge is the core competence that can enable an organization make sound decisions towards the attainment of organizational goals.

Knowledge management is a process that organizations deploy to enable them make sound decisions towards creating new knowledge which they apply to generate more innovations in their areas of operations.

Knowledge management is

applicable to both profit-oriented organizations, non-profit organizations and governmental establishments.

There is no universally accepted definition of knowledge management.

Angel A. (2018) defines knowledge management as the systematic management of an organization's knowledge assets for the purpose of creating value and meeting tactical and strategic requirements. It consists of the initiatives, processes, strategies and systems that sustain and enhance the storage, assessment, sharing, refinement and creation of knowledge.

Knowledge management was defined differently by various authors but the bottom-line in these definitions is all about putting in place a set of practices that helps an organization to improve the use and sharing of data and information in decisionmaking.

Knowledge management involves activities related to the capture, use and sharing to knowledge by an organization. It involves the management of both external linkages and knowledge flows within the organization including methods and procedures for seeking external knowledge and for establishing closer relationships with other organizations.

Components of Knowledge Management People:

People are central to any knowledge management system. An organization needs committed people at different levels to really build



knowledge sharing to fruition.

Process:

In any forward-looking organization with strong knowledge management process, knowledge flows like water supply. Whenever people need it, they just turn the tap.

Strategy:

Every knowledge management programme needs clear documented and relevant business strategy. You can have the best technology and super smart team, but it will amount to nothingness without a strategy. Every forward-looking organization needs a solid strategy that demonstrates in practical realisms a deep understanding of its critical knowledge needs. A strategy is the process of integrating organizational activities and utilizing and allocating the scarce resources within the organizational environment so as to meet the present objectives. The strategy must state in unambiguous terms the value proposition (that's how knowledge management will solve business challenges), the tools, approaches and roles needed to get there, a budget and the expected impact.

Culture:

Culture is a set of shared assumptions that guide what happens in an organization by defining appropriate behaviour for various situations. This set of beliefs and values of the elements within an organization affects the way in which they may be receptive to change.

For knowledge to flow within an organization like water supply, everyone in the organization must buy into it. This is because sharing knowledge requires discipline and some extra effort, and it is never easy to change people's habit and behaviour.

The bottom-line is that knowledge sharing should be an integral part of the culture of any organization. This is not an easy task though but it is attainable through a well thoughtout strategy. For example, reward system can be keyed into knowledge sharing to motivate the workforce.

Technology:

Any organization that wants to key into knowledge flow within the entity must spell out the relevant software solutions and equipment required to enable knowledge management system function effectively. Well installed internet and intranet system, video conferencing, online delivery of memoranda, online performance management system. Infact, paper work must be reduced to the barest minimum.

Types of Knowledge

Tacit Knowledge:

This is knowledge that is achieved from personal experiences and context. Tacit knowledge is very difficult to encode, articulate or present in a tangible form.

One can tap into another's tacit knowledge through mentoring, group project, face-to-face communication, training and video documenting.

Explicit Knowledge:

This is knowledge that is codified and easy to transfer. It is usually embedded in physical formats such as books, electronic media, database,

memoranda etc. It can easily be communicated, shared, captured or stored. This is the type of knowledge found in an organizational setting.

Implicit Knowledge:

This is the type of knowledge that is gained through incidental activities or without awareness that learning is occurring. For example, how to swim or ride a bicycle.

It is not written down and it is accessible in one way or another. Ideally, it is generalized for re-use.

Process of Knowledge Management:

1. Knowledge Identification:

The formulation of knowledge goals is the beginning of knowledge management on an organizational level.

Knowledge identification is the process of proactively identifying internal organizational knowledge.

It is obvious that knowledge is the most important strategic asset to any organization. An organization can conduct the SWOT analysis to determine its knowledge goals. Survey method is usually deployed to generate data - questionnaire, personal interview, group discussion and systematic observation.

This is carried out at departmental or unit level to determine the strength and weaknesses of the employees as well as opportunities and threats. This way, training needs will be revealed.

2. Knowledge Acquisition / Generation:

After knowledge identification, the next process is knowledge acquisition organization. This process can be viewed from two perspective. The acquisition of explorative and exploitative knowledge. Exploration

is the pursuit of new knowledge while exploitation refers to the use and refinement of existing knowledge. Exploration and exploitation can be complementary and synergistic when they are considered simultaneously. The above can be achieved through brainstorming - that is knowledgeable people in a particular area coming together to share their views about a problem in order to proffer solutions. Seminars, workshops and conferences are typical examples.

3. Knowledge Organization:

Here, the knowledge acquired is organized accordingly. That is, the acquired knowledge is documented for easy access.

4. Knowledge Storage:

In this process, the created and acquired knowledge is stored properly for future access and use. This is, also, known as knowledge repository. The essence is to aid in easy retrieval for future use.

5. Knowledge Sharing:

This process is fundamental in knowledge management. It is the process through which acquired knowledge and experiences are exchanged and shared among people in an organization and among organizations and institutions.

6. Knowledge Application:

This entails the application of the stored and shared knowledge to solve organizational problems, to use the shared knowledge for decisionmaking and to use the shared knowledge to create new knowledge.

In a situation where the stored and shared knowledge is not applied to achieve organizational goals, the whole process would be in vain.

Cont'd on pg. 23

DEPLOYMENT OF ONLINE REAL-TIME WATER CUT METERING FOR FISCAL ALLOCATION MEASUREMENT

Mohammed Sirajo (E&S, Lagos Harts.), Abdulrahman Idris (DMR, Lagos Harts. & Damete Thomas (PE Engineering)

t is critical for every production facility to account for water Lproduced for fiscal allocation metering, well testing and pipeline monitoring applications. The challenges and metering philosophy vary but one peculiar operational challenge to resolve is CRUDE OIL INJECTION RECONCILIATION. Assets are being divested and so operational modalities for cost and profit will naturally be of greater interest to stakeholders. In most cases, the traditional configuration is that primary stabilization is done at the flow station before injecting the multiphase fluid (Crudeoil + Water) into a common pipeline and transported to an integrated central processing facility (CPF) for further treatment to produce export grade Crude Oil. This arrangement allows different injectors to deliver their production to the CPF. It is imperative to reconcile what amount of water was injected by parties into the common delivery trunk line.

Basic sediment and water (BS&W, BSW or Watercut) is a measurement of impurities in liquid hydrocarbons such as crude oil. Raw crude oil will contain some amount of water and particulate matter from the reservoir formation. The BS&W of a fluid hydrocarbon measures free water, sediment, and oil emulsion as a volume percentage.

Sequel to the approval of the Director, a team comprising of DPR, trunk line owners and third party injectors conducted a study on the deployment of a particular type of Water Cut Meter developed on microwave technology for real-time water cut metering with operating range of 0-100%. The water cut meters are installed at the flow stations to determine in real time the volume of water delivered by each party using same logged data for fiscal allocation measurement in normal operating conditions and / or pipeline product loss / theft cases.

The first phase of this study was conducted at the manufacturers flow laboratory in Houston Texas, USA while the second phase was done at some selected flow stations in Nigeria.

Factory Calibration and Verification of the Meter

An initial volume of approximately 12 to 13 gallons of a single-phase liquid (oil, water, or saltwater) is loaded into the loop. The volume is recorded by using a totalizing flow meter. The liquid is circulated in the flow loop by using a progressive cavity pump at 80gpm, and the fluid flows into a specialized mixing tank that shears the fluid to keep the phases homogenously mixed. In order to change the water cut, the mixture fluid is removed from the flow loop while simultaneously injecting a pure phase of liquid (oil and water). This process is achieved by using two metering pumps that are connected by a single motor shaft. One revolution of the motor will inject the same volume of pure phase, while removing the same volume of the mixture phase from the flow loop. These pumps are run until the target water cut is achieved in the flow loop.

- initial pure liquid phase to verify the volume per revolution of the pump. It was calibrated before each test set.
- iv. The entire process is repeated for the next pure phase of liquid.

As part of the test, the team also witnessed the collection of the liquid samples and the operation of the flow loop. Two of the test run's liquid samples are drawn with 1 Liter metal bottle using the Sampling System. Liquid samples that are acquired at the end of each test point were spun in a centrifuge and the water cut was recorded. The uncertainty of the 1,000mL graduated cylinder that was used to calibrate the injection pump, had a stamped uncertainty of ± 3 ml.

Test results

The uncertainty analysis shows that the accuracy of OW-200 water cut meter series is +/-1%, while the accuracy of the loop is within \pm -0.22%. Thus the combined deviation should be +/-1.22%. Further analysis of the results is shown on the table below:

		(2.1)
S/No	Description	(%)
1.	Maximum Deviation	0.99
2.	Minimum Deviation	0.83
3.	Average Deviation	0.27
4.	Standard Deviation	0.46
5.	Repeatability (Correlation)	0.99963
6.	OW 200 Accuracy Specification	± 1%
7.	Loop Accuracy Specification	± 0.22
8.	Combined Accuracy	± 1.22

- i. The flow loop fluids are circulated for five minutes after a change in water cut, in order to ensure that the phases are evenly distributed prior to taking the test point. Five minutes data was collected, at each data point.
- ii. The automatic water cut sampler was used to collect the sample at the 4th set of oil continuous runs and the second set of water continuous run test.
- iii. The injection metering pumps were calibrated after changing the

On-site Testing and Evaluation of the Meter

The Test was conducted on two (2) WCM installed on the two (2) 6" delivery lines to Trans Niger Pipeline (TNP). Six samples were collected (3 from each meter) at the manual sampling point which is downstream of a static mixer.

A laptop was connected to the WCM and onstream water cut was determined for each time the manual sampling was

Cont'd on pg. 22

DPR UNVEILS MINIMUM INDUSTRY SAFETY TRAINING FOR DOWNSTREAM OPERATIONS (MISTDO)

By Obianuju Akwunwa, Public Affairs Unit, DPR.

epartment of Petroleum Resources (DPR) has unveiled Minimum Industry Safety Training for Downstream Operations, a programme designed to deepen safety training and practices in the Nigeria Oil and Gas sector.

The emergence of this programme is due to the increase in number of accidents by petroleum tanker drivers, gas explosions and improper handling of petroleum products which has led to loss of lives and property as well as a dent to the Nigerian economy.

Director/CEO DPR Engr. Auwalu Sarki MNSE said "Some of these incidents have come from fallen tankers, petrol station fires, gas explosion and vandalism. "Our records show that 70 per cent of accidents in the Nigerian oil and gas industry between 2013 and 2019 occurred in the downstream sector".

He said the DPR engaged critical stakeholders before coming up with the programme which has been developed in the three Nigerian major languages for easy understanding by all workers in the downstream sector.

The director said inputs were sought from Oil and Gas Training Providers, Independent Petroleum Marketers Association of Nigeria (IPMAN) and Depots and Petroleum Products Marketers Association of Nigeria (DAPPMAN).

He said contributions were also made by Major Oil Marketers Association of Nigeria (MOMAN), Federal Road Safety Corps (FRSC) and Nigeria Security and Civil Defence Corps (NSCDC).

MISTDO requires all workers in the downstream sector to undergo safety trainings at any DPR approved safety training provider considering likely hazards and errors in their daily job routine. Enforcement of MISTDO at petroleum facilities will take effect from September. 1,2020 in Lagos, Ogun, Edo, Rivers, Imo, Enugu, Abuja, Kaduna, Kano, Niger, Nasarawa and Gombe, as



personnel would be permitted to engage in downstream operations without MISTDO training and certification and effective January 1, 2021, compliance will be extended nationwide as renewal or obtaining of new permits for every downstream facility would also be based on MISTDO certification.

The Department received good will messages from Sen. James Manager, Chairman Senate Committee on Gas and Mr Alex Egbuna, Vice Chairman, House Committee on Downstream Operations, major stakeholders - Nigeria Civil Defence Corps, Federal Road Safety and major Player in the Downstream sector.





L-R: Engr. Sarki Auwalu Director/CEO DPR, Sen. James Manager, Senate Committee Chairman on Gas and Mr. Olusanya Bajomo, Deputy Director, Gas.

OGTAN DELEGATION VISITS DPR

he Director/CEO Engr. Sarki Auwalu MNSE received in audience today in his office Officials of the Oil and Gas Trainers Association (OGTAN) led by its President, Dr. Mayowa Afe. The officials were on a thank you visit to the Director for his well acclaimed presentation titled,' The Nigerian Oil and Gas Landscape: A world of opportunities for investments and

partnerships' at the recently held OGTAN webinar series.

The Director assured the visitors of his continued support for the association and promised to use available resources to promote the mandate of OGTAN in the oil and gas industry.

The OGTAN President, Dr. Mayowa Afe expressed the

appreciation of the association to the Director for his participation and informed that registration for the webinar was unprecedented. He promised to continue to liase with DPR for the development of the oil and gas sector especially in the area of capacity building.

Other members of OGTAN delegation were, Mr. Dapo Omolade, Publicity Secretary and Mrs. Carol Egejuru, General Manager. OGTAN.

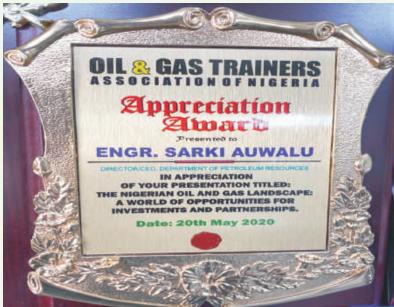


L-R: Director/CEO DPR, Engr. Sarki Auwalu MNSE receiving an award of appreciation from President, Oil and Gas Trainers Association of Nigeria (OGTAN) Dr. Mayowa Afe for his Presentation at the OGTAN webinar which took place recently



L-R: Mrs. Wonuola Adetayo, Vice President, OGTAN, Engr. Sarki Auwalu MNSE, Director/CEO DPR and Dr. Mayowa Afe, President OGTAN





AN OVERVIEW OF THE IMPACT OF ELECTRIC VEHICLES (EV) ON GLOBAL OIL AND GAS INDUSTRY

By Engr. Monday A. Yamu, Senior Civil Engr., Downstream, DPR Jos Field Office

Background

Energy is pivotally, the most enduring factor in which the world depends on for sustainability and continuous development. One of the most important aspects that utilizes these energies is the transportation sector which is largely dominated by motor vehicles and other automobiles.

Global energy sources have evolved over the years for a long period of time from different sources to serve humanity at different quantum of demands.

Typically, one of the earliest global energy sources came from wood, until the transition to new manufacturing processes from the period 1760 to 1840's referred to as the industrial revolution which started in Britain and spread to the other parts of the world.

The industrial revolution was a period where new sources of energy such as coal and steam, were used to power new machines, designed to achieve optimum capacity compared to human effort.

Coal became dominant in the late 19th century before being overtaken by petroleum products in the middle of the last century. With the advent of petroleum, a paradigm shift was globally attained in the transportation sector where cars, trucks built with internal combustion engines (ICE) and the aviation industry have been greatly impacted.

Internal combustion engines became a feat that has had a sustained presence on the world stage uninterruptedly for about 150 - 200 years owing to the efficiency and the serviceability of the engineering designs which have constantly improved over the time to serve mankind.

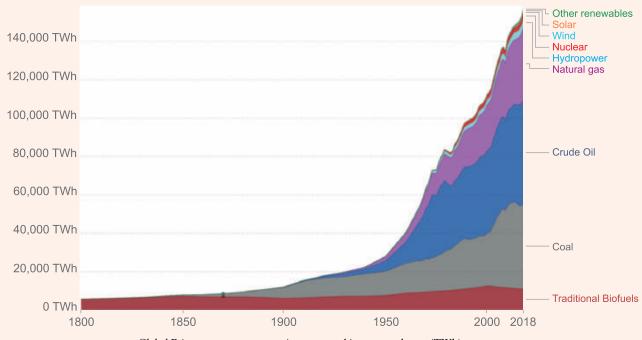
According to the US International Energy Administration (IEA), (2012), transportation accounts for 25% of all energy consumption and that passenger transportation in particular, light duties vehicles, alone consume



more than freight modes such as heavy trucks, marine and rail.

Electric vehicles dates back to 1900's where they were first introduced into the world scene in America but had a miniscule market and became a spectacular flop due to there limitation and the stiff competition that greeted them when Henry Ford, the automobile giant released his model T car in the market in 1908, a model designed with ICE that utilizes fuel over the electric cars. This removed car from being the exclusive toy of the rich, to the realm of "commoners."

Cont'd on pg. 24



Global Primary energy consumption measured in terawatt-hours (TWh) per year. Source: Vaclav Smil (2017) and BP statistical review of world energy

LAGOS OFFICE LONG SERVICE AWARD

























OFFICE LONG SERVICE AWARD









Congratulations!!!

NIGERIAN GAS FLARE COMMERCIALIZATION PROGRAMME (NGFCP) BIDDERS CONFERENCE



Engr. Sarki Auwalu Director / CEO., DPR.



Dr. Musa Zagi Deputy Director, Gas



Mr. Wole Ogunsola STA., DPR



Mrs. Nkem Agholor Director, Gas, Ministry of Petroleum Resources













Photonews



Engr. Sarki Auwalu Director / CEO., DPR.



Mr. Sanya Bajomo Deputy Director, SHE Division.



Engr. Sarki Auwalu, Director / CEO DPR, arriving for the event.





A stakeholder making his contribution



L-R: Mrs. Buchi Sibeudu, Rtd., Deputy Director DPR, Engr. Sarki Auwalu, Director / CEO. DPR and Sen. James Manager, Senate Committee Chairman on Gas.





Director / CEO. DPR, Engr. Sarki Auwalu with some stakeholders.

DEPARTMENT OF
PETROLFUM RESOURCES



Honourable Minister of State for Petroleum Resources



Chief Timipre Sylva.





L-R: Executive Governor of Bauchi State – Mr. Bala Mohammed, Director/CEO DPR, Engr. Sarki Auwalu and some stakeholders.





DPR Exhibition Booth

DPR AT 2020 NOGIC GAMES







Mr. Opeyemi Balogun Captain DPR Footbal Team





Mr. Bashir Ozigis – Defensive Midfielder DPR Football Team



Ms. Peggy Obuns and Mr. Lenin Francis displaying their medals won at the swimming competition



DPR soccer team showing their medals



Mrs. Fatima Usman displaying her medals won at the swimming competition



Ms. Toyosi Osinaike displaying her medals won at the swimming competition



DPR Sports family

THE MAYHEM IN PERFORMANCE MEASUREME

By Uchechi Ekejiuba, Corporate Services

n the corporate world, Performance Measurement is inevitable as it serves as an essential tool for organizatinal growth and sustainance.

The distinction between Performance Measurement and similar terminologies like Performance Evaluation/Appraisal and Performance Management is that it is strictly statistical, the focus being on "measurement". However, when the statistics are poor, an intervention is required. This intervention is referred to as "Evaluation or Appraisal" where questions like What, Why and How are answered to prevent further decline in the quality of statistical data previously collated.

Various measurment styles and their unique applicability in the selection of best employee, product, or service are available. This choice of measurement style is driven by the sector of practice or service delivery. For instance a Manufacturing company's priority would be the utility and quality of its products while a Bank would focus on service delivery. Others like Fast food businesses will be interested in both product and service delivery. Some common indices companies apply include turnaround time, customer

satisfaction and probably number of sales per day. It is important to note that all these indices must be measurable, feedback surveys must be obtained immediately after each transaction from customers in order to determine customer satisfaction. If this is timely done, bias and subjectivity is reduced to a large extent if not completely eliminated. The company therefore gets a true picture of its trajectory and employees have a better understanding of how their output is measured.

However, the public sector which is not intrinsically a product nor service driven industry with no competitors is challenged as there is no uniform standard of measuring its employees 'output' and consequently the selection of sort based on performance is highly subjective. Different measurement indices are used for different employees with different kinds of responsibilities, with different amounts of resources and work tools available to them, and most of all in different environments.

In view of this, if the objective of measurement is to compare employees' output and reward them accordingly as an incentive based model to encourage others, then it must learn to compare 'like' with 'like' or indeed measure such individuals independently according to



their varying circumstances.

Public sector agencies often seen as organizations that use and manage state resources or are supported from state budget and consequently have no competitors suffer a setback in this management practice.

Acedmic scholars like Isoraite (2008), Moxham (2008), Gimzauskiene (2006) Puskorius, Raipa (2002) and Pociute (2002) equally believe that the nature of performance measurement in Public sector makes it a tough process as the Public sector is more PROCESS than RESULT oriented.

Employees in the public sector must therefore ensure that subjectivity in measurement is averted for Data correctness.



COMMISSIONING OF DPR CALABAR FIELD OFFICE LABORATORY

By Mohammed Ndaliman, Deputy Mgr., Downstream Monitoring & Regulations Operations

he Department of Petroleum Resources on 15th January 2020 commissioned a stateof-the-art laboratory in her Calabar Field Office to ensure effective monitoring of the quality of petroleum products in Cross River state and the nation at large.

Mr. Awolu Oke Philip, Calabar Field Office Operations Controller, who was represented by the Head of Operations, Mr Mohammed Ndaliman, noted that the commissioning of the laboratory was a landmark achievement for the office and an avenue for the public to understand that DPR places a lot of importance on quality of Petroleum Products distributed all over the country with emphasis on Calabar which is a growing field for downstream activities in the oil and gas sector.

He reiterated that the laboratory would help to check and mitigate against the distribution of adulterated products which damages vehicles, equipment, environment



and human injury.

Present in the commissioning of the laboratory were staff of the Field/Port Harcourt Zonal office, representatives of the Depot and Petroleum Product Marketer's Association of Nigeria (DAPPMAN) Calabar and other stakeholders.









HMSPR LAUNCH THE NIGERIAN GAS TRANSPORTATION **NETWORK CODE (NGTNC) AT THE NIGERIA INTERNATIONAL PETROLEUM SUMMIT (NIPS) 2020**

By Tony Ukpo, Public Affairs Unit, DPR Headquarters

he Hon. Minister of State Petroleum Resources, Chief Timipre Sylva has officially launched the Nigerian Gas Transportation Network Code (NGTNC) which is a set of rules guiding the use of the gas transportation system in Nigeria at the Nigerian International Petroleum Summit (NIPS), Abuja.

Unveiling the Network Code, he said "In line with the government's policy to reinforce and expand gas supply and stimulate demand through the National Gas Expansion Programme, the code will provide open and competitive access to gas transportation infrastructure and development of the Nigerian gas

sector. The code will also stimulate the domestic gas supply market, drive gas-based industrialisation and the realisation of the government's aspiration to move 100 million Nigerians out of poverty,"

He reemphasized the vast opportunities that Nigeria's gas resource avails investors with a gas reserve position of 200.79 Trillion Cubic Feet (TCF) as at 1st January 2019. "The drive to optimally explore and produce this resource is driving the government's aspirations for energy security, economic diversification, job creation, and enhanced revenue generation. Gas and its derivatives as envisaged in the National Gas Policy would surely



catalyze our economic growth, and the need for gas transportation infrastructure has to be put in place for the sector to develop. In light of the above, our policy directions are geared towards addressing the infrastructural challenge,".

He charged DPR to share modalities of the Nigeria Gas Transportation Code (NGTNC) with stakeholders.

A special plenary session was organized by DPR to address concerns from stakeholders on the NGTNC.

Also speaking at the event in his goodwill message, the Director/CEO of the Department of Petroleum Resources (DPR), Engr. Sarki Auwalu MNSE, described the launch of the NGTNC as a game changing solution for Nigerians and all stakeholders. He emphasized that, only about 30% of Nigerians have access to LPG (clean fuel and environmentally friendly) in their homes, but with the launch of the NGTNC and the directive from the Hon. Minister of State Petroleum Resources on the Gas Sale Agreements (GSA's) and for all stakeholders to join the network, which is in line with Government's aspirations to providing sustainable gas at an affordable price to every Nigerian and sub Saharan African.





VISIT OF THE CRUDE OIL MONITORING COMMITTEE OF **REVENUE MOBILIZATION ALLOCATION AND FISCAL COMMISSION (RMAFC) TO DEPARTMENT OF** PETROLEUM RESOURCES (DPR)

By Dalhat Hassan Dalhat, Public Affairs Unit, Lagos Harts.

he Crude Oil Monitoring Committee of Revenue Mobilization Allocation and Fiscal Commission (RMAFC) was in the headquarters of the Department of Petroleum Resources (DPR) on a visit.

The DPR Director/CEO, Engr. Sarki Auwalu MNSE welcomed the Monitoring Team. He said: "the visit is critical and the Department is ready to share any information that may be required." He further gave an overview of DPR and emphatically qualified it as an 'Opportunity Agency' that help in wealth creation and economic growth.

Engr. Sarki Auwalu said year 2020 is a year of gas and efforts are in top gear to provide Nigerians with alternate energy source. He said Nigeria is a gas country and measures are fully in place to harness this God given Resources.

Accordingly, Engr. Sarki maintained that Compressed Natural Gas (CNG) will soon become available and affordable to Nigerians. If achieved, this

will serve as an alternative to Premium Motor Spirit (PMS).

While responding, the Chairman of the Committee, His Excellency Alhaji Ahmed Mahmud Gumel (Commissioner representing Jigawa State) conveyed to DPR warm greetings from the Chairman of the Commission, Engr. Elias Mbam FNSE.

Alhaji Mahmud said: "the Commission has mandate to monitor accruals to and disbursement of revenue from the Federation Account." He reiterated that the oil and gas revenue is a major contributor to the national coffers hence the need for this important visit.

In his words: "the Commission is of the view that DPR being the Chief Regulator of the industry should at all times enforce regulatory compliance to the International Oil Companies (OICs), Independent Producers and Marginal Field Operators and impose sanctions were necessary to ensure maximum revenue accruals to the



Federation Account."

The highlight of the visit was when the Director/CEO DPR, Engr. Sarki Auwalu led the Monitoring Team on a Visit to the National Production Monitoring System(NPMS) and the Crude Oil and Liquified Natural Gas Tracking System (COLT) for further interactive session.

The Monitoring Team was full of commendation to the Director and his Management Team and to the Department as a whole















Committee on Crude Oil Monitoring visits DPR

NIGERIAN GAS FLARE COMMERCIALIZATION PROGRAMME (NGFCP) BIDDERS CONFERENCE

By Obianuju Akwunwa, Public Affairs Unit, DPR.

epartment of Petroleum Resources (DPR) recently held the NGFCP Bidders conference where it announced the shortlisting of 200 companies based on their capacity, quality of service, track record and ability to deliver on assigned targets from a pool of about 800 applicants. Minimum floor price in the first stage of the programme for 45 approved flare gas sites was announced.

Nigerian Gas Flare Commercialization Programme (NGFCP) a Federal Government flagship initiative under the provision of the Petroleum Act aimed at creating opportunities to harness and commercialize flared gas through third party companies in order to promote indigenous capacity building, returns, multiplier effects, financial and environmental development outcomes for Nigeria.

Minimum floor price for flare gas in

land sites will be \$0.25 per million standard cubic feet (mscf), while swamp and shallow offshore sites \$0.15 per mscf and \$0.10 mscf for deep offshore

Relevant updates for data prying and data leasing was made available to aid investors decision for a week after the Bidders conference.

To ensure inclusiveness in the process, qualified applicants were requested to provide inputs, comments and suggestions on the draft Gas Sales Agreement (DSA), Milestone Development Agreement (MDA), Connection Agreement (CA), and Deliver or Pay Agreement (DoPA) posted on the portal which have considered.

Qualified applicants interested in embarking on flare site visit(s) are equally encouraged to send in their



request through info@ngfcp.gov.ng and ensure that due diligence is carried out before the Bid Submission Due Date (BSDD) which has been extended to April 10, 2020 from the previously approved due date of

Nigeria's premiere place in gas flaring elimination is evident in the progressive stride of the Nigeria Gas Flare commercialization Program (NGFCP).



Director/CEO DPR, Engr. Sarki Auwalu with DPR delegates



L-R: Berend van den Berg, Technical Adviser – Global Gas Flaring Reduction Partnership (GGFR); Dr. Musa Zagi, Deputy Director, Gas; Chris Levell, Member, NGFCP Advisory Team; Mr. Austin Okwah DPR Legal.



Panel Session



Stakeholders being registered at the event

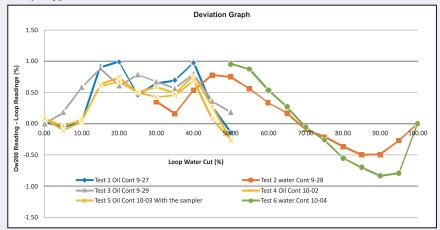
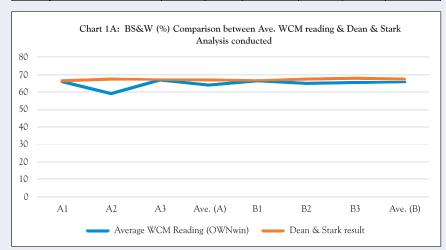
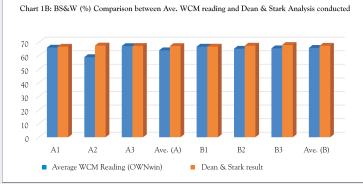


Table 1	Stream A (% BS&W)				S	Stream B	(%BS&	εW)
	A1	A2	A3	Ave. (A)	B1	B2	В3	Ave.(B)
Average WCM Reading (OWNwin)	65.95	58.96	67.07	63.99	66.65	65.14	65.44	65.74
Dean & Stark result	66.62	67.50	67.20	67.11	66.70	67.40	67.90	67.33

	Table 2: Summary of the analysis conducted (%BS&W)							
		Sample 2 of Meter A considered			Sampl	e 2 of Met considere		
S/No.	Description	Meter A	Meter B	Combined	Meter A	Meter B	Combined	
1.	Maximum Deviation	8.54	2.46	8.54	0.67	2.46	2.46	
2.	Minimum Deviation	0.13	0.05	0.05	0.13	0.05	0.05	
3.	Average Deviation	3.11	1.59	2.35	0.40	1.59	1.11	
4.	Standard Deviation	4.71	1.34	3.38	0.38	1.34	1.76	



Effect of nonsynchronisation of meter reading with sample collection timing



done. The manufacturers software for extraction of instantaneous water cut measured by the meter cut is called OWNwin.

A field analysis of two of the samples was done by centrifuge method (one from each meter). The collected samples were thereafter taken to Shell Industrial Area's laboratory where the water cut analysis for all samples was done using DPR's recommended Dean and Stack Method for sampling.

Test results

The review of the results from the exercise gave a standard deviation of 4.71%, 1.34% and 3.38% between the average BS&W measured by the WCM and the result of the laboratory analysis of the samples collected for Meter A, Meter B and Combined results of Meters A & B respectively. However, the team observed that meter reading and sample collection timing was not synchronised during 2nd sample taken from meter A.

Another comparison of the results without considering the Sample 2 of Meter A revealed a standard deviation of 0.38%, 1.34% and 1.76% for Meter A, Meter B and Combined results of Meters A & B respectively. Details of the analysis conducted are shown by the table and charts:

Conclusion/Recommendations:

At the end of the exercise the following conclusions and recommendations were made:

- Results obtained from the WCM and those from the Laboratory analysis (Dean & Stack method) were basically the same.
- ii. Differences observed were mostly attributed to lack of proper agitation/ mixing of samples when results were taken by the WCM.
- iii. Jet mixers must be installed upstream of the WCM for homogenous mixing.
- iv. Since current standards only focus on sampling and analysis for custody transfer applications with relatively low water content (0% to 2% by volume), the WCM may be used for other non-custody transfer applications with high volume of water.
- Despite observed discrepancies, the WCM has more advantage in addressing the errors associated with manual sampling and theoretical BS&W adopted by some injectors.

Barriers to Knowledge Management:

Empirical investigations have revealed certain barriers to effective knowledge management as follows:

Lack of relational learning:

Relational learning occurs when learning among organizations are facilitated. This is an avenue through which vital knowledge is transferred from one organization to another. Any organization that does not key into relational learning will be stagnated in all its ramifimications.

In sufficient training:

Knowledge identification goals reveal the training needs of employees. When the training needs are not met, then the employees will be bereft of the set skills to forge ahead.

Unwillingness of employees to share knowledge:

When the employees lack the political will to share knowledge, then knowledge management becomes problematic.

Lack of reward system:

When there is no incentive for seeking and sharing knowledge, the employees would be indifferent to the ideals of knowledge sharing.

Lack of management support:

The supportive leadership of management is quite key to knowledge sharing. When this is lacking, knowledge management would be in quagmire.

Lack of culture of knowledge sharing:

Ab initio, the ideals of knowledge sharing should be part and parcel of the organizational culture. When this happens, the employees would be free to share knowledge, and reverse would be the case when knowledge sharing is not embedded in the

organizational culture.

Lack of requisite technology:

In the 21st century, the application of technology has become an unavoidable pre-requisite for knowledge management. The world, really, has become a global village – intranet, internet, email, portals, video conferencing cannot be dispensed with in knowledge management. When these are lacking, then forget it.

Strategies for Effective Knowledge Management

Reward system:

Any forward-looking organization must entrench a reward system in order to motivate the employees to seek, acquire and share knowledge for the good of the organization. For example, a call for essays in particular fields which would attract prizes and other incentives.

Management support:

The management of any forward-looking organization must encourage the creation of knowledge by supporting research activities; encouraging team work among the employees and collaboration with other organizations for knowledge transfer.

Application for knowledge:

Every organization that knows its onions in knowledge management must ensure that generated knowledge is applied in solving organizational problems and in making sound decisions.

Capacity building:

Since knowledge management plays a key role on organizational performance, employees at all levels must be trained and retrained on how to explore and exploit knowledge available in the organization in order to be equipped to make sound decisions.

• Acquisition of technologies:

Any forward-looking organization must always endeavour to acquire requisite technologies necessary to support people and processes, involved in knowledge management.

• Comprehensive database:

The management of any forward-looking organization must continually improve on knowledge storage in a comprehensive database.

• Knowing sharing as part of the organization culture:

Knowing sharing should be a part and parcel of the culture of any forward-looking organization. When this happens, the employees would have the political will to share knowledge freely. The culture of knowledge management would encourage social learning in the work place. In this case, employees would exchange ideas, observe each other, and ask questions and learn with and from one another.

Final Note Takeaway:

- DPR, still has a lot to do in knowledge sharing.
- ☐ The digital seraphin cans meant for surveillance are being kept in stores of DPR Offices nationwide. It seems no one has a clue as to what to do with them. This should not be case in the 21st Century.
- The outcomes of the "smart inspector" workshop conducted in DPR Offices nationwide should be evaluated in order to know the next line of action. There is no time to waste.
- Every DPR staff member is still grappling with the issue of accessing monthly payslips online. How are we going to solve this problem?_Solution: knowledge sharing!

Electric cars are making a return trip into the transportation sector in the 21st century again. This write up seeks to briefly describe an electric car and its variations and to examine and review some of the facts on the impacts of the modern electric vehicle on the petroleum Industry; the facts, the truths and the half-truths that are seemingly trendy.

What is an Electric Vehicle (EV)?

An electric vehicle is an automobile that is propelled by one or more electric motors, using energy typically stored in rechargeable batteries (Wikipedia). They are also called green cars or energy cars in China and some parts of the world.

EV runs at least partially on electricity unlike conventional vehicles that use petrol or diesel-powered engines. EVs come in different forms:

1. Hybrid Electric Vehicles (HEV)

This is a fusion of both electricity and petrol system, the HEV utilizes both petrol and electricity in a special mechanism to run. The electric energy is generated by the car's own braking system to recharge the battery. This is called "regenerative braking".

2. Plug-In Hybrid Electric Vehicle (PHEV)

This is also known as extended range electric vehicle (EREV), this utilizes regenerative Braking and 'pluggingin' to external electrical charging outlet.

3. Battery Electric Vehicles: (BEV)

This is a fully electric vehicle that is only powered by electricity and do not have petrol engine fuel tank or exhaust pipe.

Some trendy models of electric cars include BMW i3, Nisan Leaf, Tesla Model S, Mitsubishi i-MiEV etc.

The position of Proponents of **Electric Cars**

Human activities since the inception of industrial revolution (1750) have produced about 40% increase in the

atmospheric concentration of carbon dioxide (CO2) from 280ppm in 1750 to 407.4ppm in 2018, Lindsay (2020)

The vast majority of anthropogenic CO₂ (i.e. produced by human activities) come from combustion of fossil fuels, principally coal, oil and natural gas, with additional contribution from deforestation. changes in land use, soil erosion etcetera.

One of the potent arguments in support of electric cars is that, CO2 is one of the greenhouse gases that has principally contributed to global warming impacting our environment negatively and internal combustion engines (cars) utilize carbon intensive energy source to function, therefore, in order to enhance a cleaner environment, a healthier air, electric cars are the most preferred elements to be used to curb environmental degradation.

Proponents of electric cars hold the view that since the engine is all powered by electricity, there will be no need for greasing, servicing and oiling of the engine, this has also removed a considerable stress of constantly changing the oil from the user and cost of maintenance has been greatly conquered.

Electric Cars - Not a Zero Sum to Oil Industry

No doubt, in honesty of purpose that the electric cars return journey could

be a fantastic opportunity for world economies to harness in the wake of modern civilization. Considering the argument which appears rosy and beautiful in all sense put across in support of electric cars, the atmosphere is saturated with half truths about electric cars coming to give the oil industry a summary execution. Having read a number of articles written in support of both sides on the subject matter I feel this might not be the case anytime soon as put across by the loud gong of the proponents. The imposing fear and agitation poised by manufacturers and advertisement companies might not be as potent as it appears to be at the moment.

Considering the world's evolving environmental policies of all 'green culture' and promotion of eco-friendly activities, the electric car seems to be a good baby that probably needs to be nurtured into a relatively far future considering the so many present encumbrances associated with its usage.

Some Drawbacks of Electric Vehicles. Taking a critical x- ray of the subject matter and adopting some purist position will unravel the fact that the usage of electric vehicles does not always result in fewer emissions (e.g. greenhouse gases) and environmental degradation. These emissions are shifted to the generating plant depending on the mode of electricity generation to power the vehicle. This



goes to say that an electric vehicle is only as green as the electricity that feeds its battery. For example, a coalpowered battery is dirtier than a solarpowered battery.

Current battery technology requires invasive mining technologies of rare earth minerals, heavy reliance on rare-earth elements such as Neodymium, Lanthanum, Terbium and dysprosium and other critical metals such as Lithium and Cobalt to produce the batteries may be problematic as these resources are finite compared to fossil fuel and can cause environmental degradation as conventional energy production.

The carbon footprint of batteries in electric vehicles are the main reasons why electric vehicles can generate more carbon emissions over their lifecycle - from procurement of raw materials to manufacturing, use and recycling – than petrol or diesel cars. Producing an electric vehicle contributes, on average, twice as much to global warming potential and uses double the amount of energy than producing a combustion engine car. This is mainly because of its battery. Battery production uses a lot of energy, from the extraction of raw materials to the electricity consumed in manufacture. The bigger the electric car and its range, the more battery cells are needed to power it, and consequently the more carbon

Most EVs have short ranges. On a full charge most EV are limited to 60(90km) to 100miles very few go to 100miles very few go between 200-300miles. Other disadvantages may include the long time it takes to recharge electric vehicles compare to few minutes it takes to fill up a conventional car at the station, recharging EV takes about four hours to reach a full charge some take a whopping 15 to 20 hours.

produced, Jonathan (2017).

Electric cars are costly compared to ICE, they are also silent or have relatively low sound and this could be a disadvantage as this can cause accident especially if the car is coming from behind. Cities facing acute

power shortage may not be a good ground for electric cars considering travelling on a rural road where the need to recharge may arise. Batteries of EV are required to be changed between 3 to 10 years and this could impact on the environment negatively.

Governments Projections about Electric Cars.

Even though governments all over the world have been making projections and a considerable amounts of proponents are under scouring the would-be availability of EV in the markets which might impact drastically on oil demand globally; India putting it at year 2030, China and Germany at 2040 where EV will account for about 54% of cars in transportation arena, the indices on ground suggest that more will have to be done to achieve this feat, if not, the much talked about break through that is expected from the EV business might be a fiasco just like it was in 1908 particularly in sub – Saharan Africa. Norway is current world leader in EV usage, about 6.6% of vehicles are registered EV.

Electric Cars in Africa Sub Regions

The Nigerian business magnate and politician, Sen. Benedict Murray – Bruce launched a kia electric car in 2015 in Nigeria which was a debut entry into the country. Sister African countries have been making similar moves in recent times as Francis Romano launched his first electric car

on Kenya soil, a Nissan Leaf model in Nairobi the capital of Kenya in 2016. October 2018 saw the arrival of few electric motorcycles in Kigali, Rwanda.

Conclusion

Electric vehicles would not be the disruptor to oil products like the digital technology was to the photographic film or iPhones were to cellular phones, this is because, based on the facts observed and deposed above, Oil and gas will still have its pride of place in the transportation sector in the world stage alongside this reincarnated electric cars at least for a considerable number of years into the future of global energy sustainability. The EV and the conventional petrol or gasoline powered automobiles will co-exist.

It won't be a zero-sum game, with ample room for growth on both sides particularly as internal combustion engines become increasingly efficient. The fuel economy of some new cars and trucks hit a record 24.7 (39.52km) miles per gallon in 2016 and many smaller cars and clean diesel vehicles offer a fuel economy of up to 40miles per gallon.

Big economies like China and India are investing massively in mega refineries as well as renewable energy technologies to meet up with their commitment under the Paris Agreement because they understand that the electric car is not a magic bullet.



DEALING WITH DEPRESSION

By Adaeze Moedu, PAU., Warri Zonal Office

epression is a mood disorder and a medical condition that affects how people feel, think, and act. It is a feature of some psychiatric syndrome and may be triggered by general life issues which subsequently result to grief, disappointment, regret, inferiority complex, shame, addiction or side effect of some medication. In some cases, and at some level, it manifests in the form of anger, violence, nonchalance or a total loss of drive or motivation to be productive. Extreme cases have led to suicide.

Depression is a thief. It steals your life and all that makes life worth living in your mind. If you feel this way, it is time to speak up. Speak to someone.

The hurdle! How do you talk about a feeling you do not understand? Or explain to someone that those little things you found joy in are no longer of interest to you? How do you tell someone that suddenly you are too

scared to be happy? Or explain to someone that you desire to live life but no longer have a clue on how life is lived? Should you be feeling this way, please you need to speak to someone.

It is known that the biggest challenge in dealing with depression is the act of letting people know how you feel for fear of being judged; being strong enough to seek help. Incidentally, this is the first step to healing.

In managing depression, endeavor to engage in more social activities (you just must try) and not to breed the urge to withdraw from the society. Find the inner strength to confront your fears.

Your fears remain fears when you avoid them. Feed right with healthy options, keep yourself hydrated, avoid alcohol intake and get enough sleep. Develop a safe and healthy routine that works best for you and stick to it. In some cases,

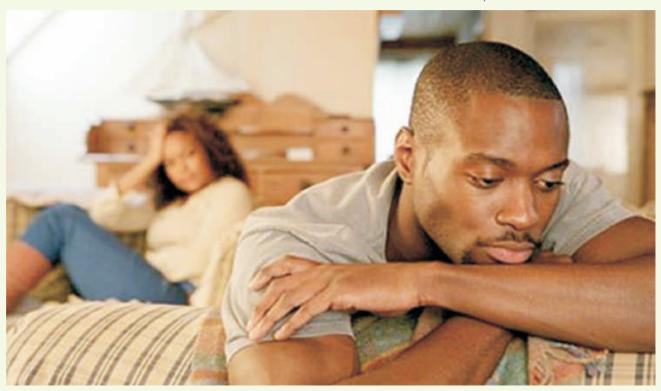


clinical aid is required; therapy (behavioral or counseling) and medication.

Unfortunately, depression can be unnoticed by people in your immediate circle. We owe humanity a minute or more to be more observant in order to tell if someone around us needs help in this line. Time, care, love, attention is required of everyone to help people dealing with depression.

For you in the struggle, keep in mind that with lifestyle changes, right set of therapy and medication, you can get out of depression.

Do not be discouraged. You are loved, that is all that matters.





Naming Ceremony of baby Zarina, daughter of Mr. & Mrs. Hafeez Atiogbo, DPR Hqtrs.



Chief (Sir) Mike Nnekwelugo of DPR Enugu Field Office and wife (Lady) Ifeyinwa, during the celebration of their wedding anniversary.



Congratulations on your Traditional Marriage, Mr. Kingsley Obo of Calabar Field Office and former Miss Precious Peter.



Congratulations to Mr. Mohammed Sirajo of DPR Headquarters and his wife, Sameera Dangote on their wedding ceremony.



PENGASSAN Service Award Ceremony.



Mr. Olukayode Ojo Retired Head, FAD.



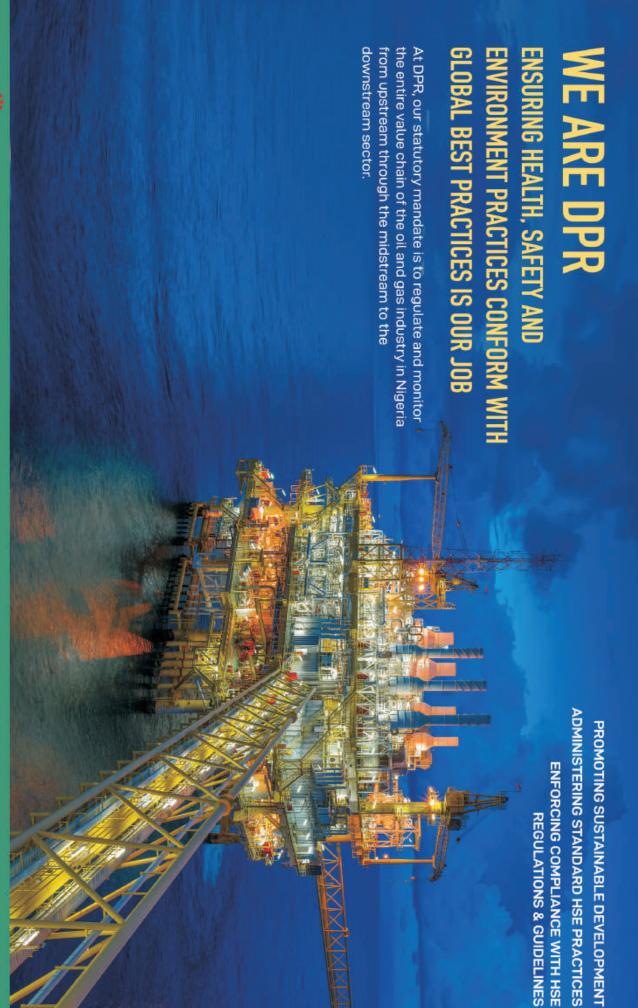
Mr. Idris Ali Retired ZOPSCON, Maiduguri Zonal Office.



Mr. Amos Jokodola Retired OPSCON, Lokoja Field Office.



Mr. Wole Akinyosoye Retired ZOPSCON, Lagos Zonal Office.





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ENFORCING COMPLIANCE WITH HSE

REGULATIONS & GUIDELINES