



## Department of Petroleum Resources

### 2018 OIL & GAS ANNUAL REPORT

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## 2. REGULATORY STRUCTURE OF THE NIGERIAN OIL AND GAS INDUSTRY

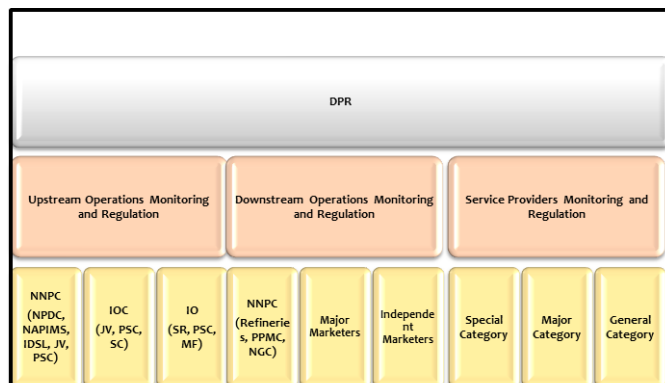


Figure 1: The Nigeria Oil and Gas Industry

Department of Petroleum Resources is the regulatory agency of the oil and gas industry in Nigeria. Specifically, the roles of the Department include:-

1. Conservation of Nigeria's Hydrocarbon Resources
2. Regulation and Monitoring of industry activities to ensure compliance with best standards & practices
3. Ensure safe, and environmentally sustainable development of the oil and gas operations' activities
4. Maintenance and administration of the national repository for archiving and retrieval of oil and gas data
5. Administration & management of acreages and concessions
6. Implementation of all government policies

## 3. MAKING MODULAR (MINI) REFINERIES WORK

In the face of dependency on importation for petroleum products availability, attempts by the Nigerian Government to encourage local private investments in refining of crude oil in the past had yielded very low success. The present government has launched new initiatives to encourage establishment of modular (mini) refineries as a short-term solution to the product supply problem. A study of the modular (mini) refinery project shows that it is a viable project even in the event of competing with mega refineries in the same market (though the margin may become very low under this situation). In order to meet government's aspiration of making Nigeria a crude oil refining hub, government has provided conducive environment and incentives to make mini (modular) refinery projects more attractive. This article evaluates the progress status in the establishment of modular refineries in Nigeria while identifying the major challenges being faced with recommended solutions.

Nigeria's four state-owned refineries with a plate capacity of 445,000 barrels per stream day have continued to perform far below capacity. Over eighty percent of the petroleum products consumed in Nigeria is imported<sup>1</sup>. The pump prices of these products except Automotive Gas Oil (Diesel) are subsidized by the government. It is believed that the Federal Government of Nigeria spends over 200 billion Naira every year to subsidized petroleum products. These monies would have been used to provide infrastructure or provide better quality education or health facilities. A conservative estimate suggests that 55 million barrels of petroleum products are consumed daily in Nigeria at the ratio of 35:12:8 for PMS, AGO and DPK respectively. Analysis also shows that at the current demand growth rate, we will need to process 750,000 barrels of crude per day to meet the nation's demand for petroleum product by 2020<sup>1</sup>. There is currently a deficit 2.6 million barrels per

stream day between demand and supply of petroleum products in Africa<sup>2</sup>.

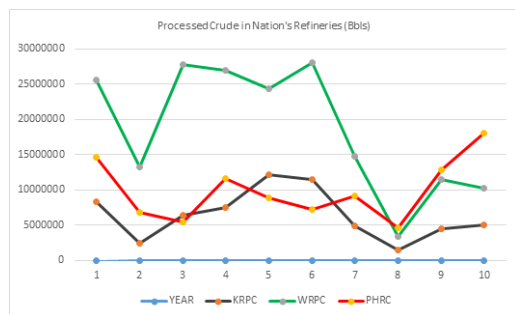


Figure 2: Crude oil processed in Nigeria's refineries between 2008 and 2017

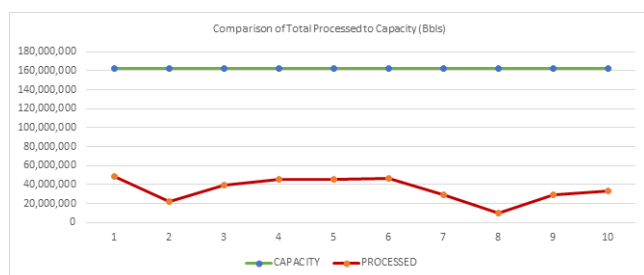


Figure 3: Comparison of the total crude processed to capacity of the nation's refineries (2008 – 2017)

In order to ensure regular supply of petroleum product for domestic consumption and provide veritable platforms for Nigerians and investors to take advantage of these opportunities, the Federal Government has launched some initiatives to support the establishment of private mini (modular) refineries. These initiatives include:

- The “7 Big Wins” Initiative (2015 – 2019). The initiative captured the short and medium-term priorities to grow Nigeria's Oil and Gas Industry. It proffers a roadmap for developing a stable and enabling oil and gas landscape with improved transparency, efficiency, stable investment climate, and a well-protected environment. The “Big Win 4” focuses on expansion of domestic refining capacity and rehabilitation of existing refineries.
- The National Petroleum and Gas Policies. The National Gas Policy was approved by the Federal Executive Council on the 28<sup>th</sup> day of June 2017. This was followed immediately by the approval of the National Petroleum policy on the 19<sup>th</sup> day of July 2017. These policies provide the framework for creation of strong refining hub in Nigeria, divestment of government-owned refineries, co-location of brownfield refineries with existing refineries and construction of private refineries.

#### The Mini (Modular) Refinery Project:

A modular refinery is a prefabricated crude oil processing plant constructed on skid mounted surfaces, with each structure containing a portion of the entire refining process plant, with by interstitial piping to form an easily manageable process. Technically, a modular refinery could be either simple or complex, with capacity ranging from 100 bpsd to 10,000 bpsd. They are however not defined by size. They can be transported in modules across distances and put together at the location desired. The other advantages of modular refineries include short project completion time, relatively small overall project cost, provides quicker investment return, can be installed in small space and could be designed towards petroleum product need around its location.

Attempts to construct private refineries in Nigeria started in 1990 with the call for indigenous private participation in crude oil refining by the government. Between 1990 and 2000, the Department of Petroleum Resources received over 100 applications. From 2001 to 2007, the 3-Stage Licensing (License to Establish - LTE, Approval to Construct - ATC and License to Operate - LTO) process, which is still in use to date was adopted. About 105 applications were received during the period, leading to grant of 21 LTEs in 2002 and 17 ATCs in 2004. Between 2008 and 2011, focus was placed more on mini (modular) refineries. Nine (9) LTEs were granted and two plants were fabricated, but only the 1,000 bpsd capacity Niger Delta Petroleum Resources refinery at Ogbelle River State was commissioned. From 2012 to date, about 34 LTEs have been granted for mini(modular) refinery projects; six (6) of these companies have been granted ATCs and are at different levels of construction.

The success rate of establishment of mini(modular) refineries in Nigeria is low; only one modular refinery has been commissioned since 2008 out of about 43 LTEs issued. However, in the last two years, construction of 7,000 bpsd OPAC Refinery in Umusetti, Delta State and 10,000 bpsd Niger Delta Petroleum Resources Refinery expansion project in Ogbelle, Rivers State started off and are near completion owing to the implementation of government policies and the support from the Department of Petroleum Resources. A few other modular refinery projects, namely Edo Refinery, Ikpoba Okha; Petrolex Refinery, Ijebu Ode; African Refinery, Port Harcourt and Southfield Refinery, Ologbo have either completed detailed engineering, secured modules to relocate or the equipment are being fabricated at the manufacturers yard.

Using Bonny Light Crude as an example, If the buying of the crude and the selling of the products are done using international prevailing prices, it is possible to show that the operation of the plant is profitable using the RefTexas Yield / Profit calculator for a 10,000 bpsd mini(modular) topping refinery that processes Bonny Light crude oil into naphta, diesel and fuel oil.

<b>Refinery Equipment of Texas, LLC</b>					
Crude Oil Type: Bonny Light Assay ( 32.9 API )					
11/05/2019 Yield / Profit Calculator - Per Day					
10,000	Barrels per day	Cost per barrel USD	78.00	Total	\$780,000.00
1.00%	Avg. % yield for water-gas	\$7,600.00	100	15,899	\$0.00
28.78%	Avg. % yield for naphtha	\$224,404.00	2,878	457,564	\$0.80
52.96%	Avg. % yield for diesel	\$413,068.00	5,296	841,994	\$0.80
17.26%	Avg. % yield for HFO **	\$134,628.00	1,726	274,411	\$0.80
0.00%	Avg. % yield for asphalt**	\$0.00	0	0	\$0.00
Assumptions: Crude API see above				return	\$1,259,175.46
** heavy fuel oil is a blend of diesel no. 4, 5 & 6, resid (higher quality than #6)				cost	\$780,000.00
*** yield for asphalt road base / residuum or bitumen				Daily \$	\$478,175.46
www.platts.com				30 days	\$14,375,263.68
				Annual	\$172,503,164.16
*A reliable feedstock assay, including a True Boiling Point (TBP) distillation to verify the crude oil yields are required. The spreadsheet above is the best estimates that can be done without the True Boiling Point Assay.					

Figure 4: Yield /Profit Calculation for a 10,000 bpsd mini refinery

#### Conclusion and Recommendations

Modular refinery is a profitable project, even in the event of mega refineries competing in the same market. Competition in the same market with mega refineries will only reduce the profit margin for the smaller plant based on economies of scale. The establishment of modular refineries is the short-term remedy for availability of petroleum products from local production in Nigeria and the government in the last few years have been providing conducive environment and support for the realization of establishment of modular refineries in Nigeria. The government has also approved total waiver (100%) on custom duties for modular refinery equipment imported for licensed modular refinery projects. These efforts by the government and the support from the Department of Petroleum Resources have changed the modular refinery projects landscape in the last two years. It is projected that at least five modular refineries with each processing up to 40,000 barrels of crude per day will be operational in Nigeria in the next five years.

The efforts of the government in providing conducive environment for establishment of modular refineries in Nigeria have been commendable. However, a lot more incentives can be put in place to realize government's aspiration of making Nigeria a refining hub in Africa. These incentives can take the form of establishing a special purpose vehicle (trust fund) to assist in funding modular refinery projects; providing tax holidays and foreign loan guarantees for modular refinery projects; and investing in power and road/rail infrastructure especially in areas where mini refinery licenses have been granted.

#### References

- Ogbuigwe, T (2017) Modular Refineries: Prospect and Challenges. Paper delivered at the Nigerian Academy of Engineering (NAE). <https://guardian.ng/opinion/modular-refineries-prospects-and-challenges/> - [Accessed 12 May 2019]
- International Energy Agency (2018). Oil Market Report; 13 April 2018 <https://www.iea.org/media/omrreports/fullissues/2018-04-13.pdf> – [Accessed 12 May 2019]

Table 1 : Annual Report on Multi-client Projects in Nigeria

#	Company	Survey Name	Geological Province	Type Of Survey	Quantum Of Survey(Km/Km1)	Remarks
1	Mabon Limited	African Region Survey	Onshore & Offshore Niger Delta	2D Seismic & Geochemistry Survey	62,000 km	Data available for licensing. Contact company.
2	Mabon Limited	Nigeria Span Survey	Offshore Niger Delta	2D Seismic Regional Survey	12,000 km	Data available for licensing. Contact company.
3	TGS Petrodata JV Offshore Services Ltd	Brokerage of Data	Offshore Niger Delta	2D Seismic	17,000 km	Data available for licensing. Contact company.
4	PGS Geophysical Nig. Ltd	Brokerage of Data	Offshore Niger Delta	3D Seismic	26,000 km2	Data available for licensing. Contact company.
5	PGS Geophysical Nig. Ltd	MC3D	Offshore Benin Basin	3D Seismic	2,845 km2	Data available for licensing. Contact company.
6	PGS Geophysical Nig. Ltd	Mega Survey	Offshore Niger Delta	3D Seismic	98,000 km2	Data available for licensing. Contact company.
7	Sonar / Ikon Science	Niger Delta Pressure Study	Onshore & Offshore Niger Delta	Pore-Pressure Study	Niger Delta	Data available for licensing. Contact company
8	Polarcus Nigeria Limited	Brokerage of Data	Offshore Niger Delta	3D Seismic Survey	9,308km2	Data available for licensing. Contact company.
9	Bliview Energy Services	Well Logs Scanning & Digitizing	Onshore & Offshore Niger Delta	Digital Well Logs	Over 7,000 LAS	Digital Well Logs available for licensing. www.geoinfoweb.com
10	Harvex Geosolutions Limited	Brokerage of Data	Offshore Niger Delta	Controlled Source Electromagnetic	NA	Data is being marketed and licensed. Contact company.

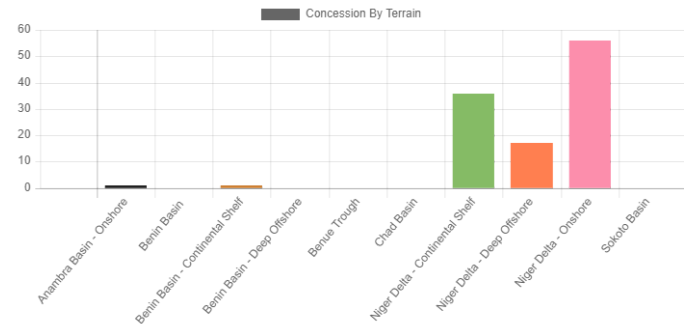
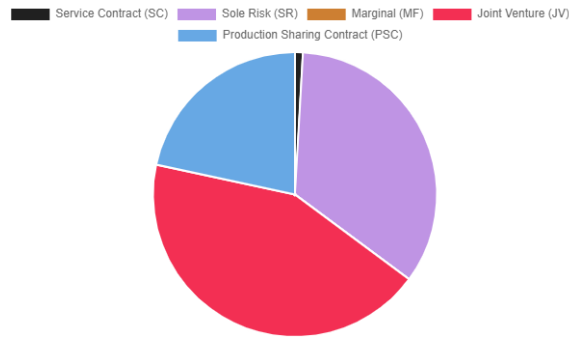
Table 2 : Status of Oil Mining Leases - OMLs

#	Concession	Contract Type	Area (Sq.km)	Equity Distribution	Basin/Terrain	Operator	Date Of Grant	License Expiration
1	OML29	Joint Venture (JV)	983		Niger Delta - Onshore	AITEO E&P CO	1/7/1989	30-06-2019
2	OML120	Sole Risk (SR)	910		Niger Delta - Deep Offshore	ALLIED ENERGY RESOURCES NIGERIA LTD	27-02-2001	26-02-2021
3	OML121	Sole Risk (SR)	885		Niger Delta - Deep Offshore	ALLIED ENERGY RESOURCES NIGERIA LTD	27-02-2001	26-02-2021
4	OML112	Sole Risk (SR)	438		Niger Delta - Continental Shelf	AMNI INTERNATIONAL DEVELOPMENT CO.	12/2/1998	12/2/2018
5	OML117	Sole Risk (SR)	51		Niger Delta - Continental Shelf	AMNI INTERNATIONAL DEVELOPMENT CO.	6/8/1999	5/8/2019
6	OML52	Joint Venture (JV)	247		Niger Delta - Onshore	AMNI INTERNATIONAL DEVELOPMENT CO.	14-06-1997	13-06-2027
7	OML109	Sole Risk (SR)	772		Niger Delta - Continental Shelf	ATLAS PETROLEUM INTERNATIONAL LTD	25-05-1996	24-05-2016
8	OML55	Joint Venture (JV)	849		Niger Delta - Onshore	BELEMA	14-06-1997	13-06-2027
9	OML110	Sole Risk (SR)	966		Niger Delta - Continental Shelf	CAVENDISH PETROLEUM NIGERIA LIMITED	7/8/1996	6/8/2016
10	OML49	Joint Venture (JV)	1707		Niger Delta - Onshore	CHEVRON NIGERIA LTD.	14-06-1997	13-06-2027
11	OML51	Joint Venture (JV)	145		Niger Delta - Onshore	CHEVRON NIGERIA LTD.	14-06-1997	13-06-2027
12	OML89	Joint Venture (JV)	364		Niger Delta - Continental Shelf	CHEVRON NIGERIA LTD.	18-08-2014	17-08-2034
13	OML91	Joint Venture (JV)	157		Niger Delta - Continental Shelf	CHEVRON NIGERIA LTD.	18-08-2014	17-08-2034
14	OML86	Joint Venture (JV)	385		Niger Delta - Continental Shelf	CHEVRON NIGERIA LTD.	18-08-2014	17-08-2034
15	OML88	Joint Venture (JV)	773		Niger Delta - Continental Shelf	CHEVRON NIGERIA LTD.	18-08-2014	17-08-2034
16	OML90	Joint Venture (JV)	653		Niger Delta - Continental Shelf	CHEVRON NIGERIA LTD.	18-08-2014	17-08-2034
17	OML95	Joint Venture (JV)	1217		Niger Delta - Continental Shelf	CHEVRON NIGERIA LTD.	18-08-2014	17-08-2034
18	OML132	Production Sharing Contract (PSC)	804		Niger Delta - Deep Offshore	CHEVRON NIGERIA LTD.	20-12-2005	19-12-2025
19	OML131	Production Sharing Contract (PSC)	1210		Niger Delta - Deep Offshore	OANDO PLC	24-04-2005	23-04-2025
20	OML103	Sole Risk (SR)	914		Niger Delta - Onshore	CONOIL PRODUCING LTD	2/6/1993	1/6/2013
21	OML136	Sole Risk (SR)	1295		Niger Delta - Continental Shelf	CONOIL PRODUCING LTD	27-07-2006	26-07- 2026
22	OML59	Sole Risk (SR)	836		Niger Delta - Onshore	CONTINENTAL OIL AND GAS LTD.	6/6/1998	5/6/2018
23	OML149	Production Sharing Contract (PSC)	428		Niger Delta - Onshore	CONTINENTAL OIL AND GAS LTD.	10/3/2016	9/3/2036
24	N/A	Sole Risk (SR)	221		Niger Delta - Onshore	DUBRI OIL COMPANY	2/5/2013	1/5/2033
25	N/A	Production Sharing Contract (PSC)	656		Niger Delta - Deep Offshore	TOTAL E&P	17-05-2007	16-05-2017
26	OML139	Production Sharing Contract (PSC)	656		Niger Delta - Deep Offshore	TOTAL E&P	17-05-2007	16-05-2017
27	OML99	Joint Venture (JV)	171		Niger Delta - Continental Shelf	TOTAL E&P	2/5/2013	1/5/2033
28	OML100	Joint Venture (JV)	179		Niger Delta - Continental Shelf	TOTAL E&P	2/5/2013	1/5/2033
29	OML102	Joint Venture (JV)	796		Niger Delta - Continental Shelf	TOTAL E&P	2/5/2013	1/5/2033
30	OML58	Joint Venture (JV)	518		Niger Delta - Onshore	TOTAL E&P	14-06-2007	13-06-2027
31	N/A	Sole Risk (SR)	1295		Niger Delta - Onshore	EMERALD ENERGY RESOURCES LIMITED	8/11/2007	7/8/2027
32	OML148	Production Sharing Contract (PSC)	870		Niger Delta - Onshore	ENAGEED RESOURCES LIMITED	15-05-2015	14-05-2035
33	OML18	Joint Venture (JV)	1035		Niger Delta - Onshore	EROTON E&P CO	1/7/2009	30-06-2019
34	OML133	Production Sharing Contract (PSC)	1100		Niger Delta - Deep Offshore	ESSO EXPLORATION	8/2/2006	7/2/2026
35	OML145	Production Sharing Contract (PSC)	1293		Niger Delta - Deep Offshore	ESSO EXPLORATION	30-05-2014	29-05-2034
36	N/A	Sole Risk (SR)	759		Niger Delta - Continental Shelf	EXPRESS PET AND GAS CO LTD	1/11/1995	31-10-2015
37	OML83	Joint Venture (JV)	109		Niger Delta - Continental Shelf	FIRST ARIES PETROLEUM LTD.	18-08-2014	17-08-2034
38	OML85	Joint Venture (JV)	515		Niger Delta - Continental Shelf	FIRST ARIES PETROLEUM LTD.	18-08-2014	17-08-2034
39	OML71	Joint Venture (JV)	730		Niger Delta - Continental Shelf	WAP/ Dangote	18-12-2014	17-12-2034

#	Concession	Contract Type	Area (Sq.km)	Equity Distribution	Basin/Terrain	Operator	Date Of Grant	License Expiration
40	OML72	Joint Venture (JV)	1129		Niger Delta - Continental Shelf	WAEP/ Dangote	18-12-2014	17-12-2034
41	OML149	Production Sharing Contract (PSC)	941		Niger Delta - Onshore	GLOBAL ENERGY COMPANY LIMITED	5/2/2015	4/2/2035
42	OML149	Production Sharing Contract (PSC)	171		Niger Delta - Continental Shelf	GLOBAL ENERGY COMPANY LIMITED	10/3/2016	9/3/2036
43	OML127	Sole Risk (SR)	1281		Niger Delta - Deep Offshore	STAR DEEPWATER	25-11-2004	24-11-2024
44	OML104	Joint Venture (JV)	675		Niger Delta - Continental Shelf	MOBIL PRODUCING NIGERIA UNLTD	14-01-1998	13-01-2018
45	OML67	Joint Venture (JV)	119		Niger Delta - Continental Shelf	MOBIL PRODUCING NIGERIA UNLTD	11/3/2011	10/3/2031
46	OML68	Joint Venture (JV)	119		Niger Delta - Continental Shelf	MOBIL PRODUCING NIGERIA UNLTD	11/3/2011	10/3/2031
47	OML70	Joint Venture (JV)	1250		Niger Delta - Continental Shelf	MOBIL PRODUCING NIGERIA UNLTD	11/3/2011	10/3/2031
48	OML114	Sole Risk (SR)	464		Niger Delta - Continental Shelf	MONI PULO LTD	3/1/1999	02-o1-2019
49	OML24	Joint Venture (JV)	162		Niger Delta - Onshore	NEWCROSS E&P CO	1/7/2009	30-06-2019
50	OML149	Production Sharing Contract (PSC)	990		Niger Delta - Onshore	NEWCROSS E&P CO	14-03-2017	13-03-2037
51	N/A	Production Sharing Contract (PSC)	1131		Niger Delta - Deep Offshore	NIGERIAN AGIP ENERGY (NAE)	31-05-2006	30-05-2026
52	OML125	Production Sharing Contract (PSC)	1219		Niger Delta - Deep Offshore	NIGERIAN AGIP ENERGY (NAE)	2/1/2003	1/1/2023
53	OML60	Sole Risk (SR)	358		Niger Delta - Onshore	NIGERIAN AGIP OIL COMPANY	14-06-1997	13-06-2027
54	OML61	Sole Risk (SR)	1500		Niger Delta - Onshore	NIGERIAN AGIP OIL COMPANY	14-06-1997	13-06-2027
55	OML62	Sole Risk (SR)	1211		Niger Delta - Onshore	NIGERIAN AGIP OIL COMPANY	14-06-1997	13-06-2027
56	OML63	Sole Risk (SR)	2246		Niger Delta - Onshore	NIGERIAN AGIP OIL COMPANY	14-06-1997	13-06-2027
57	OML16	Service Contract (SC)	360		Niger Delta - Continental Shelf	AGIP ENERGY & NATURAL RESOURCES (AENR)	6/8/1979	5/8/2019
58	OML126	Production Sharing Contract (PSC)	705		Niger Delta - Continental Shelf	ADDAX EXPLORATION	25-11-2004	24-11-2024
59	OML137	Production Sharing Contract (PSC)	849		Niger Delta - Continental Shelf	ADDAX EXPLORATION	23-04-2007	22-04-2027
60	OML123	Production Sharing Contract (PSC)	401		Niger Delta - Continental Shelf	ADDAX EXPLORATION	14-08-2002	13-04-2022
61	OML124	Production Sharing Contract (PSC)	300		Niger Delta - Onshore	ADDAX EXPLORATION	14-08-2002	13-04-2022
62	OML40	Sole Risk (SR)	498		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	1/7/1989	30-06-2019
63	OML42	Sole Risk (SR)	814		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	1/7/1989	30-06-2019
64	OML26	Sole Risk (SR)	165		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	1/7/1989	30-06-2019
65	OML34	Sole Risk (SR)	950		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	1/7/1989	30-06-2019
66	OML119	Sole Risk (SR)	715		Niger Delta - Continental Shelf	NIGERIA PET. DEV. CO. (NPDC)	31-10-2000	30-10-2020
67	OML111	Sole Risk (SR)	461		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	6/18/1905	7/8/1905
68	OML64	Sole Risk (SR)	278		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	-09-1989	1/9/1900
69	OML65	Sole Risk (SR)	1019		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	-09-1989	1/9/1900
70	OML66	Sole Risk (SR)	204		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	7/9/1989	6/9/2019
71	OML13	Sole Risk (SR)	1988		Niger Delta - Onshore	NIGERIA PET. DEV. CO. (NPDC)	20-12-2016	19-12-2036
72	OML30	Joint Venture (JV)	1097		Niger Delta - Onshore	NPDC/ SHORELINE NATURAL RESOURCES	1/7/1989	30-06-2019
73	OML14	Sole Risk (SR)	1220		Niger Delta - Deep Offshore	OIL AND GAS NIGERIA LIMITED	18-07-07	17-07-2027
74	OML115	Sole Risk (SR)	310		Niger Delta - Continental Shelf	ORIENTAL ENERGY RESOURCES	20-5-1999	19-5-2019
75	OML98	Joint Venture (JV)	523		Niger Delta - Onshore	PANOCEAN OIL CORPORATION NIG	-06-1976	7/7/2018
76	OML145	Production Sharing Contract (PSC)	544		Niger Delta - Onshore	PANOCEAN OIL CORPORATION NIG	23-10-2014	22-10-2034
77	OML122	Sole Risk (SR)	1295		Niger Delta - Continental Shelf	PEAK PETROLEUM INDUSTRIES NIGERIA LIMITED	17-05-2001	16-05-2021
78	OML4	Sole Risk (SR)	267		Niger Delta - Onshore	SEPLAT PRODUCTION AND DEV. CO.	1/7/1989	30-06-2019
79	OML38	Sole Risk (SR)	2152		Niger Delta - Onshore	SEPLAT PRODUCTION AND DEV. CO.	1/7/1989	30-06-2019
80	OML41	Sole Risk (SR)	291		Niger Delta - Onshore	SEPLAT PRODUCTION AND DEV. CO.	1/7/1989	30-06-2019
81	OML53	Joint Venture (JV)	1562		Niger Delta - Onshore	SEPLAT PRODUCTION AND DEV. CO.	14-06-1997	13-06-2027
82	OML11	Joint Venture (JV)	3097		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
83	OML17	Joint Venture (JV)	1301		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
84	OML20	Joint Venture (JV)	405		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
85	OML21	Joint Venture (JV)	372		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
86	OML22	Joint Venture (JV)	722		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
87	OML23	Joint Venture (JV)	483		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
88	OML25	Joint Venture (JV)	429		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
89	OML27	Joint Venture (JV)	165		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
90	OML28	Joint Venture (JV)	936		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
91	OML31	Joint Venture (JV)	1097		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
92	OML32	Joint Venture (JV)	565		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
93	OML33	Joint Venture (JV)	336		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
94	OML35	Joint Venture (JV)	1144		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
95	OML36	Joint Venture (JV)	338		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
96	OML43	Joint Venture (JV)	767		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
97	OML45	Joint Venture (JV)	76		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
98	OML46	Joint Venture (JV)	1080		Niger Delta - Onshore	SHELL PETROLEUM DEVELOPMENT CO.	1/7/1989	30-06-2019
99	OML74	Joint Venture (JV)	1324		Niger Delta - Continental Shelf	SHELL PETROLEUM DEVELOPMENT CO.	18-12-2014	17-12-2034
100	OML77	Joint Venture (JV)	962		Niger Delta - Continental Shelf	SHELL PETROLEUM DEVELOPMENT CO.	18-12-2014	17-12-2034
101	OML79	Joint Venture (JV)	970		Niger Delta - Continental Shelf	SHELL PETROLEUM DEVELOPMENT CO.	18-12-2014	17-12-2034



#	Concession	Contract Type	Area (Sq.km)	Equity Distribution	Basin/Terrain	Operator	Date Of Grant	License Expiration
102	OML118	Production Sharing Contract (PSC)	1167		Niger Delta - Deep Offshore	SHELL NIG. E&P CO. (SNEPCO)	28-11-2005	27-11-2025
103	OML135	Production Sharing Contract (PSC)	926		Niger Delta - Deep Offshore	SHELL NIG. E&P CO. (SNEPCO)	3/7/2006	2/7/2026
104	OML130	Sole Risk (SR)	1295		Niger Delta - Deep Offshore	SOUTH ATLANTIC PETROLEUM LIMITED	25-04-2005	24-04-2025
105	OML127	Production Sharing Contract (PSC)	1198		Niger Delta - Deep Offshore	STAT OIL	28-12-2004	27-12-2024
106	OML129	Production Sharing Contract (PSC)	1023		Niger Delta - Deep Offshore	STAT OIL	28-12-2004	27-12-2024
107	OML142	Sole Risk (SR)	1295		Anambra Basin - Onshore	SUMMIT OIL INTERNATIONAL	12/6/2009	11/6/2029
108	OML144	Sole Risk (SR)	96		Niger Delta - Continental Shelf	SUNLINK PETROLEUM	2/5/2013	1/5/2033
109	OML145	Production Sharing Contract (PSC)	29		Niger Delta - Onshore	STERLING OIL EXP&ENERGY PROD. CO. LTD (SEPCO)	25-10-2014	24-10-2034
110	OML143	Production Sharing Contract (PSC)	369		Niger Delta - Onshore	STERLING OIL EXP&ENERGY PROD. CO. LTD (SEPCO)	29-12-2010	28-12-2030
111	OML113	Sole Risk (SR)	1670		Benin Basin - Continental Shelf	YINKA FOLAWIYO PET CO LTD	1/6/1998	31-05-2018

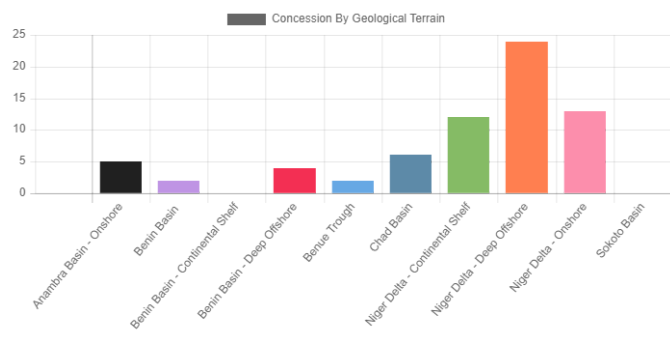
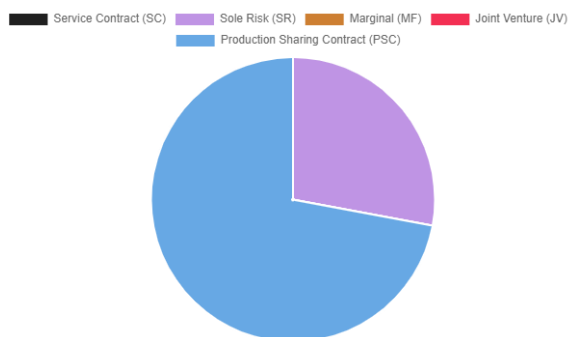


**Table 3 : Status of Oil Prospecting Licenses - OPLs**

#	Concession	Contract Type	Area (Sq.km)	Equity Distribution	Basin/Terrain	Operator	Date Of Grant	License Expiration
1	OPL907	Production Sharing Contract (PSC)	2498		Anambra Basin - Onshore	AFREN GLOBAL ENERGY RESOURCES LIMITED	6/27/1905	19-02-2018
2	OPL917	Production Sharing Contract (PSC)	1710		Anambra Basin - Onshore	AFREN GLOBAL ENERGY RESOURCES LIMITED	6/27/1905	19-02-2018
3	OPL452	Sole Risk (SR)	522		Niger Delta - Onshore	AMALGAMATED OIL CO. LTD.	6/14/1905	24-05-2016
4	OPL325	Production Sharing Contract (PSC)	1265		Benin Basin - Deep Offshore	ASHBERT OIL & GAS LTD.NPDC/TRAIN-COSY ENERGY	6/27/1905	
5	OPL286	Production Sharing Contract (PSC)	804		Niger Delta - Deep Offshore	SAHAHRA.BG EXP. NIC LTD.	6/28/1905	7/3/2017
6	OPL240	Production Sharing Contract (PSC)	48		Niger Delta - Continental Shelf	BOC JNHP CONSORTIUM	6/29/1905	
7	OPL471	Production Sharing Contract (PSC)	1370		Niger Delta - Continental Shelf	CHINA NATIONAL OIL DEV. CO (CNODC)	6/28/1905	22-04-21017
8	OPL257	Production Sharing Contract (PSC)	426		Niger Delta - Deep Offshore	CONOIL PRODUCING LTD	6/27/1905	8/2/2016
9	OPL289	Production Sharing Contract (PSC)	386		Niger Delta - Continental Shelf	CLEANWATERS CONSORTIUM	6/28/1905	22-04-2012
10	OPL290	Production Sharing Contract (PSC)	531		Niger Delta - Continental Shelf	CONOIL PRODUCING LTD	6/29/1905	16-10-2013
11	OPL305	Sole Risk (SR)	1558		Benin Basin	CROWNWELL PETROLEUM LTD	6/15/1905	18-05-20202
12	OPL306	Sole Risk (SR)	1889		Benin Basin	CROWNWELL PETROLEUM LTD	6/15/1905	18-05-2020
13	OPL322	Sole Risk (SR)	1789		Niger Delta - Deep Offshore	DAJO OIL LIMITED	30-03-2004	26-02-2019
14	OPL204	Sole Risk (SR)	1670		Niger Delta - Onshore	AFRICOIL & MARKETING CO. LTD.	10/8/1993	8/7/2010
15	OPL251	Production Sharing Contract (PSC)	940		Niger Delta - Deep Offshore	DSV	16-12-2012	
16	OPL221	Production Sharing Contract (PSC)	2286		Niger Delta - Deep Offshore	TOTAL E&P	19-11-2003	18-11-2013
17	OPL227	Sole Risk (SR)	974		Niger Delta - Continental Shelf	EXPRESS PET AND GAS CO LTD	6/22/1905	2/12/2018
18	OPL226	Production Sharing Contract (PSC)	1257		Niger Delta - Continental Shelf	ESSAR E&P LIMITED	18-05-2007	9/3/2015
19	OPL233	Production Sharing Contract (PSC)	920		Niger Delta - Deep Offshore	ESSO EXPLORATION	19-07-2005	18-07-2015
20	OPL235	Sole Risk (SR)	1480		Niger Delta - Onshore	FIRST ARIES PETROLEUM LTD.	10/8/1993	
21	OPL905	Production Sharing Contract (PSC)	2600		Benin Basin - Deep Offshore	GAS TRANSMISSION & POWER LIMITED	23-04-2007	22-04-2017

#	Concession	Contract Type	Area (Sq.km)	Equity Distribution	Basin/Terrain	Operator	Date Of Grant	License Expiration
22	OPL2010	Production Sharing Contract (PSC)	179		Niger Delta - Continental Shelf	GLOBAL ENERGY COMPANY LIMITED	18-05-2007	29-12-2015
23	OPL2012	Production Sharing Contract (PSC)	849		Niger Delta - Continental Shelf	GRASSO NIG. LTD..SIGMUND OIL FIELDS LTD.	16-06-2012	17-06-2019
24	OPL247	Sole Risk (SR)	1165		Niger Delta - Deep Offshore	HERITAGE OIL & GAS CO. LTD.	1/3/1900	5/4/2019
25	OPL252	Production Sharing Contract (PSC)	814		Niger Delta - Deep Offshore	INC NATURAL RESOURCES	6/28/1905	
26	OPL292	Production Sharing Contract (PSC)	1195		Niger Delta - Deep Offshore	INC NATURAL RESOURCES	6/28/1905	
27	OPL234	Production Sharing Contract (PSC)	1214		Niger Delta - Onshore	MONI PULO LTD	6/29/1905	15-12-2013
28	OPL239	Production Sharing Contract (PSC)	65		Niger Delta - Continental Shelf	MONI PULO LTD	6/29/1905	15-12-2013
29	OPL231	Production Sharing Contract (PSC)	244		Niger Delta - Onshore	MONI PULO LTD	6/29/1905	16-05-2016
30	OPL276	Production Sharing Contract (PSC)	472		Niger Delta - Onshore	NEWCROSS E&P CO	16-02-2006	20-01-2017
31	OPL733	Production Sharing Contract (PSC)	2611		Chad Basin	NEW NIGERIA DEVELOPMENT COMPANY LIMITED	6/27/1905	7/8/2016
32	OPL809	Production Sharing Contract (PSC)	2581		Benue Trough	NEW NIGERIA DEVELOPMENT COMPANY LIMITED	6/27/1905	7/8/2016
33	OPL810	Production Sharing Contract (PSC)	2584		Benue Trough	NEW NIGERIA DEVELOPMENT COMPANY LIMITED	6/27/1905	7/8/2016
34	OPL722	Production Sharing Contract (PSC)	2540		Chad Basin	NEW NIGERIA DEVELOPMENT COMPANY LIMITED	6/27/1905	7/8/2016
35	OPL244	Production Sharing Contract (PSC)	1700		Niger Delta - Deep Offshore	NIGERIA AGIP EXPL. LTD (NAE).SHELL NIG.ULTRA DEEP LTD.	6/22/1905	19-12-2011
36	OPL282	Production Sharing Contract (PSC)	695		Niger Delta - Continental Shelf	NIGERIAN AGIP OIL COMPANY	6/27/1905	7/9/2015
37	OPL291	Production Sharing Contract (PSC)	1287		Niger Delta - Deep Offshore	STARCREST LIMITED	6/28/1905	15-10-2016
38	OPL702	Sole Risk (SR)	2574		Chad Basin	NNPC.FES	5/20/1905	Not applicable due to section 20 of NNPC Act Cap 320 of LFN 1990
39	OPL703	Sole Risk (SR)	2772		Chad Basin	NNPC.FES	5/20/1905	
40	OPL705	Sole Risk (SR)	2547		Chad Basin	NNPC.FES	5/20/1905	
41	OPL707	Sole Risk (SR)	2582		Chad Basin	NNPC.FES	5/20/1905	
42	OPL242	Production Sharing Contract (PSC)	1789		Niger Delta - Deep Offshore	NIGERIA PET. DEV. CO. (NPDC)	7/3/2011	
43	OPL233	Production Sharing Contract (PSC)	126		Niger Delta - Continental Shelf	NIGER DELTA PET. RESOURCES LTD	6/28/1905	29-06-2016
44	OPL215	Sole Risk (SR)	2586		Niger Delta - Deep Offshore	NOREAST PET. NIG. LTD.	21-10-1991	20-04-2020
45	OPL325	Sole Risk (SR)	1652		Niger Delta - Deep Offshore	NOREAST PET. NIG. LTD.	13-05-1999	
46	OPL236	Production Sharing Contract (PSC)	1652		Niger Delta - Onshore	OANDO PLC	6/27/1905	7/9/2011
47	OPL278	Production Sharing Contract (PSC)	92		Niger Delta - Onshore	OANDO PLC	6/27/1905	7/9/2015
48	OPL241	Production Sharing Contract (PSC)	1257		Niger Delta - Deep Offshore	OILWORLD LIMITED	6/29/1905	9/3/2020
49	OPL285	Production Sharing Contract (PSC)	1167		Niger Delta - Deep Offshore	EMO E&PTOTAL E&P LTD	6/28/1905	22-02-2017
50	OPL279	Production Sharing Contract (PSC)	1103		Niger Delta - Deep Offshore	EMO E&PTOTAL E&P LTD	6/28/1905	22-02-2017
51	OPL297	Production Sharing Contract (PSC)	1290		Niger Delta - Deep Offshore	ONGC - MITTAL ENERGY NIGERIA LTD (OMEL)	6/28/1905	
52	OPL310	Sole Risk (SR)	1935		Benin Basin - Deep Offshore	OPTIMUM PETROLEUM DEVELOPMENT LIMITED	6/14/1905	9/6/2018
53	OPL915	Sole Risk (SR)	1195		Anambra Basin - Onshore	ORIENTAL PET. REFINERY LTD.	31-01-2005	29-01-2015
54	OPL916	Sole Risk (SR)	963		Anambra Basin - Onshore	ORIENTAL PET. REFINERY LTD.		
55	OPL320	Production Sharing Contract (PSC)	1789		Benin Basin - Deep Offshore		6/24/1905	16-07-2021
56		Production Sharing Contract (PSC)	1023		Niger Delta - Deep Offshore		7/7/1905	
57	OPL284	Production Sharing Contract (PSC)	1131		Niger Delta - Deep Offshore	SAHARA ENERGY E&P	17-07-2006	6/7/2017
58	OPL228	Production Sharing Contract (PSC)	1915		Niger Delta - Onshore	SAHARA ENERGY E&P	11/5/2007	
59	OPL245	Sole Risk (SR)	1958		Niger Delta - Deep Offshore	NIGERIA AGIP EXPL. LTD (NAE).SHELL NIG.ULTRA DEEP LTD.	22-12-2003	10/5/2021

#	Concession	Contract Type	Area (Sq.km)	Equity Distribution	Basin/Terrain	Operator	Date Of Grant	License Expiration
60	OPL206	Sole Risk (SR)	2020		Anambra Basin - Onshore	SUMMIT OIL INTERNATIONAL	6/12/1905	19-01-2014
61	OPL2005	Production Sharing Contract (PSC)	662		Niger Delta - Onshore	STERLING OIL EXP&ENERGY PROD. CO. LTD (SEPCO)	6/29/1905	29-04-2019
62	OPL2006	Production Sharing Contract (PSC)	662		Niger Delta - Onshore	STERLING OIL EXP&ENERGY PROD. CO. LTD (SEPCO)	6/29/1905	29-04-2019
63		Production Sharing Contract (PSC)	103		Niger Delta - Onshore	STERLING OIL EXP&ENERGY PROD. CO. LTD (SEPCO)	7/8/1905	
64	OPL2008	Production Sharing Contract (PSC)	41		Niger Delta - Continental Shelf	TENOIL PET. & ENERGY SERVICES LTD.CLAYFORD	6/29/1905	25-05-2016
65	OPL281	Production Sharing Contract (PSC)	122		Niger Delta - Onshore	TRANSNATIONAL CORPORATION	6/28/1905	1/5/1900
66	OPL257	Production Sharing Contract (PSC)	234		Niger Delta - Deep Offshore	WAEP/ Dangote	6/29/1905	
67	OPL292	Production Sharing Contract (PSC)	1218		Niger Delta - Deep Offshore	WAEP/ Dangote	6/29/1905	
68	OPL248	Production Sharing Contract (PSC)	2448		Niger Delta - Deep Offshore	ZEBBRA ENERGY LIMITED	6/21/1905	1/6/1900



**Table 4 : Summary Of Acreage Situation As At 31 December**

Basin	No of OPL Blocks Allocated	No of OML Blocks Allocated	No Of Open Blocks	Total No Of Blocks
Benin	25	30	24	79
Benue	2	3	11	16
Bida	9	3	16	28
Chad	3	3	5	11
Niger Delta	18	21	13	52
Sokoto	20	21	6	47
Benue	15	13	32	60
Niger Delta	10	7	12	39
Anambra	6	1	12	19
Benin	9	3	36	48
Benue	2	0	41	43
Bida	0	0	17	17
Chad	6	0	40	46
Niger Delta	53	105	34	192
TOTAL	0	0	0	0

**Table 5 : List of Marginal Fields**

Field Name	Company Name	Block
OGBELLE	NIGER DELTA PET. RESOURCES LTD	OML54
IDU	NIGER DELTA PET. RESOURCES LTD	OML53
AKPO	PRIME EXPLORATION	OML11
IBOT	ORIENTAL ENERGY RESOURCES	OML67
ATRIA	ORIENTAL ENERGY RESOURCES	OML67
STUBB-CREEK	UNIVERSAL ENERGY	OML13/14
DAWES-ISLAND	EURAFRIC ENERGY LIMITED	OML54
UMUSETI	PILLAR OIL LTD	OML56

Field Name	Company Name	Block
ALA	BAYELSA OIL COMPANY LTD	OML46
BENIBOYE SOUTH	MOVIDO E&P LIMITED	OML88
GALISOMA	BICTA ENERGY & MANAGEMENT SYSTEMS LIMITED	OML90
ORORO	GUARANTEE PETROLEUM LIMITED (OPERATOR)	OML95
AZUZUAMA	PLATFORM PETROLEUM	OML38
AMOJIE	SOGENAL LIMITED	OML56
AGBAMI	SOGENAL LIMITED	OML90
ISONSI	MILLENIUM OIL AND GAS LIMITED	OML11
AFIA	YINKA FOLAWIYO PET CO LTD	OML90
IYEDE	NETWORK E&P NIGERIA	OML13
DIBI	WALTERSMITH PETROMAN OIL LIMITED	OML16
UMUSADEGE	MIDWESTER OIL AND GAS CO. LTD./Suntrust Oil Company Limited	OML56
EWOLIGBI	INDEPENDENT ENERGY LIMITED	OML30
KE	DEL SIGMA	OML55
AMENAM - Kpono	ASSOCIATED OIL AND GAS LIMITED (OPERATOR)	OML14
KRAKAMA	FRONTIER OIL LTD.	OML13
EBENDO/OBODETI	ENERGIA LTD.	OML56
IKIKE	GOLAND PETROLEUM DEV. CO. LIMITED	OML88
BONGA-NORTH	EXCEL EXPLORATION & PRODUCTION LIMITED	OML46
KD	SAHARA ENERGY LIMITED (OPERATOR)	OML40
INYI CREEK	GREEN ENERGY INTERNATIONAL LIMITED	OML11
KIFI	ALL GRACE ENERGY LIMITED	OML17

**Oil and Condensates Reserves**The Oil and Condensate reserves increased by about 0.08% when compared with the year 2017 figures, which stood at 36.971 Billion barrels.

**Table 6 : Oil and Condensates Reserves**

Year	Oil (MMbbls)	Condensate (MMbbls)	(Oil + Condensate) (MMbbls)
2008	0	0	0
2009	0	0	0
2010	31219.00	0	31219
2011	31169.60	0	31169.6
2012	32233.24	743450.00	775683.24
2013	31813.51	0	31813.51
2014	31870.00	0	31870
2015	31643.91	0	31643.91
2016	31271.77	0	31271.77
2017	63119.08	10668.60	73787.68
2018	0	0	0

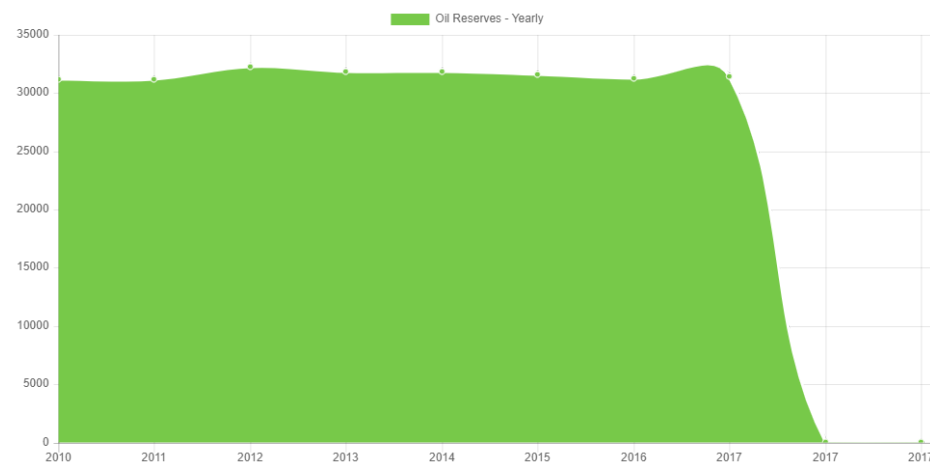


Figure  
Oil Reserves By Year

A. On Contract BasisThe percentage distribution of the Nation’s Oil and Condensate reserves across the various contract types has remained within a +/- 2% margin over the last four years.

Table 7 : Nigeria Oil & Condensate Reserves Distribution on Contract Basis

Contract Type	Oil (MMbbls)	Condensate (MMbbls)	Total (MMbbls)
Service Contract (SC)	0.00	0.00	0.00
Sole Risk (SR)	0.00	0.00	0.00
Marginal (MF)	0.00	0.00	0.00
Joint Venture (JV)	0.00	0.00	0.00
Production Sharing Contract (PSC)	0.00	0.00	0.00
Total	0.00	0.00	0.00

On Terrain Basis.The percentage distribution of the Nation’s Oil and Condensate reserves across the various operating terrains has remained within a +/- 2% margin over the last three years.

Table 8 : Nigeria Oil & Condensate Reserves Distribution on Terrain Basis as at January 1,

Terrain	Oil (MMbbls)	Condensate (MMbbls)	Total (MMbbls)
Land	0.00	0.00	0.00
Shallow Offshore	0.00	0.00	0.00
Deep Offshore	0.00	0.00	0.00
Swamp	0.00	0.00	0.00
Total	0.00	0.00	0.00

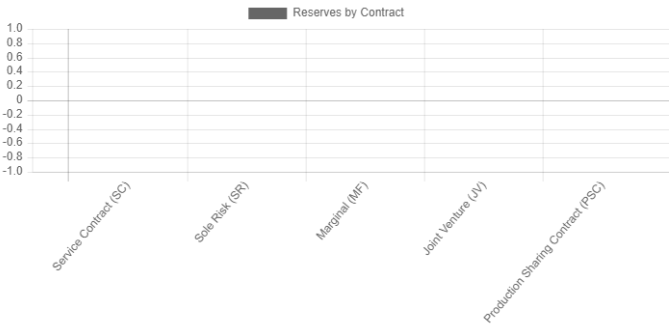


Figure  
Oil & Condensate Reserves Distribution on Contract

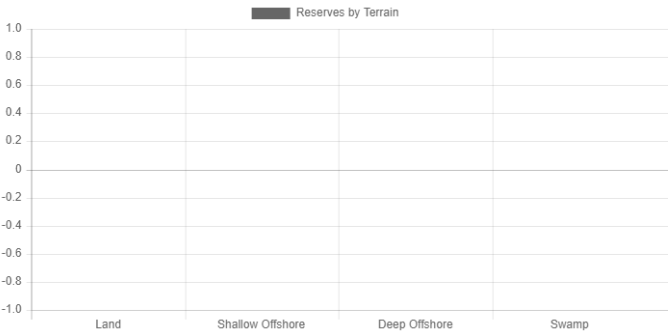


Figure  
Oil & Condensate Reserves Distribution on Terrain

Table 9 : Oil Reserves Net Addition, Depletion Rate and Life Index on Contract Basis

Contract Type	Production, Million Barrels	Net Addition (Crude Oil), Million Barrels	% Net Addition	Depletion Rate, %	Life Index, Years
Total	0	0	0	0	0

A. Net Addition To Reserves On Contract Basis and National Perspective i. National Perspective

The net addition to the Nation’s 2P Oil and Condensate reserves volumes based on an annual production of 754.62 MMB is 30.19 MMB. This shows a positive net addition to the Nation’s reserves of about 0.08%. The increase in reserves is attributed mainly to an upward revision to reserves from studies in the International JV, PSC and Indigenous JV/SR contract types and reporting of Owowo and Preowei field reserves.

ii. Joint Venture

The International Joint Venture companies recorded an increase in the net addition to 2P oil and condensate reserves of about +46.21 MMB which accounts for a positive net addition of about 0.3%. This increase can be attributed to an upward revision of reserves from studies carried out by SPDC and NAOC. Mobil, Chevron, and Total recorded a downward revision in the net addition to oil and condensate reserves. This was largely attributed to production and revisions based on production/reservoir performance and studies.

iii. Production Sharing

The Production Sharing Contract companies documented an increase in the net addition to 2P oil and condensate reserves of about +297.43 MMB which accounts for a positive net addition of about 3.5%. Major contributors to this increase are the inclusion of Owowo and Preowei field reserves in the report submission of Esso and TUPNI respectively. Enagage, StarDeep and SNEPCo recorded a downward revision in their net addition to 2P oil and condensate reserves. This was largely attributed to production and revisions based on studies.

iv. Sole Risk

The analysis of Indigenous JV and Sole Risk company’s contribution showed a decrease in the net addition to 2P oil and condensate reserves of about -340.54 MMB which accounts for a negative net addition of about -3.3%. The negative net addition was due to revisions, studies, and production. This negative addition is due mainly to disparity in the reserves figure for OML 42 as reported by Neconde and NPDC. Although the

reserves for OML 42 in our database prior to this disparity was as quoted by Neconde. However Emerald and Consolidated Oil recorded an upward revision in the 2P oil and condensate reserves. This was largely attributed to production and revisions based on studies.

#### v. Marginal Field Operators

The Marginal Field operators recorded an increase in the net addition to 2P oil and condensate reserves of about +27.09 MMB which accounts for a positive net addition of about 4.8%. This increase can be attributed to an upward revision of reserves from studies carried out by Green Energy, Midwestern and reserves data for fields in the Marginal Field basket.

### B. Reserves Depletion Rate And Life Index on Contract Basis and National Perspective

#### i. National Perspective

The reserves depletion rate is a measure (percentage) of 2018 total oil and condensate production divided by the reserves as of January 1, 2019. This indicator gives a bird's eye on an annual basis, what percentage proportion of the quoted reserves was produced.

The life index, on the other hand, is a measure of the reserves as of January 1, 2019, divided by the total production in 2018. This parameter highlights how long (in years) quoted reserves volumes will be available for production.

The Nation's depletion rate and life index are 2.04% and 49.03 years respectively. These parameters lie within the long-term range. However, to achieve the aspiration of the Federal government of 4MMBOPD daily production and reserves of 40MMMB, there is the need for corresponding increase in reserves as production is increases, otherwise, the life index will fall from a sustainable long-term threshold to a less futuristic and sustainable medium to short term range.

ii. **Joint Venture** The Joint Venture Operators, despite having the highest production (about 41.64%) among all the contract types, recorded a low depletion rate of about 1.8% and high life index of 56.34 years.

#### iii. Production Sharing

The Production Sharing Contract companies had the highest depletion rate of 3.10% and the lowest life index of 32.15 years, while accounting for about 36.08% of the Nation's total production. It is obvious from Table 5 that PSC Companies have the highest depletion rate and lowest life index when compared to the other contract regimes. Perhaps, the Companies may have taken advantage of the poor government take in the Deep Offshore terrain to deplete the reserves there-in with little regard for long term sustainable production as amplified by the life index.

#### iii. Sole Risk

The Sole Risk Companies had the lowest depletion rate of 1.5% and invariably the highest life index of 65.49 years. These Companies accounted for about 20.14% of the Nation's total production in 2018. This depletion rate does not reflect the fact these companies hold the second largest reserves of about 26.90%.

#### iv. Marginal Field Operators

The Marginal field Companies produced about 2.14% of the Nation's total production in year 2018. The depletion rate was about 2.7%, with a life index of 36.83 years and a National reserves portfolio of 1.61%. The reserves hold a potential for production that lies within the medium-term range.

#### v. "Unhealthy Companies" - Life Index Less Than Fifteen Years

About nine (9) operating Companies have oil and condensate life index of less than fifteen years. The statistics paints a very gloomy picture for these companies and urgent steps will be taken to address this observed trend. The Department is engaging the Companies to review their strategic plan to guarantee future reserves growth in order for them to remain in business.

### A. Reserves Replacement Rate (RRR)

The reserves replacement ratio / rate is a measure of the number of reserves added to the company's / Nation's reserves base during the year relative to the amount of oil produced. This is calculated by weighing the ratio of net additions to reserves against total production for the year and is used to judge the operating performance of the exploration and production industry. An RRR that is consistently over 100% is ideal as it indicates that more reserve is being replaced than is produced.

**Table 10 : Reserves Replacement Rate (RRR) on Contract Basis**

Contract Type	Oil & Condensates Reserves as at 1/1 2019	Oil & Condensates Reserves as at 1/1 2018	2018 Oil & Condensates Production, MMB	Net Addition to Oil & Condensate Reserves, MMB	Reserves Replacement Rate, %
Service Contract (SC)	0.00	0.00	0.00	0.00	0.00
Sole Risk (SR)	0.00	1,698.32	0.00	-1,698.32	0.00
Marginal (MF)	0.00	1,301.95	0.00	-1,301.95	0.00
Joint Venture (JV)	0.00	1,896.24	0.00	-1,896.24	0.00
Production Sharing Contract (PSC)	0.00	469.46	0.00	-469.46	0.00
Total (National)	0.00	5,365.97	0.00	-14,961.07	0.00

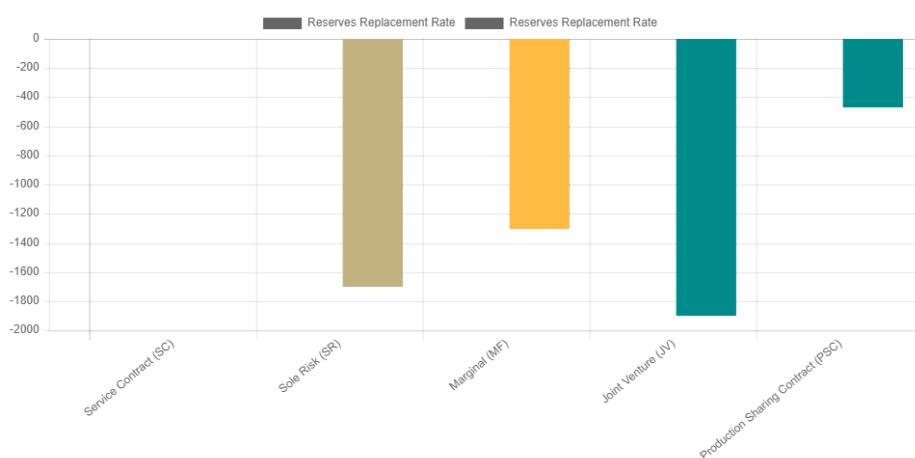


Figure  
2018 Reserves Replacement Rate (RRR)

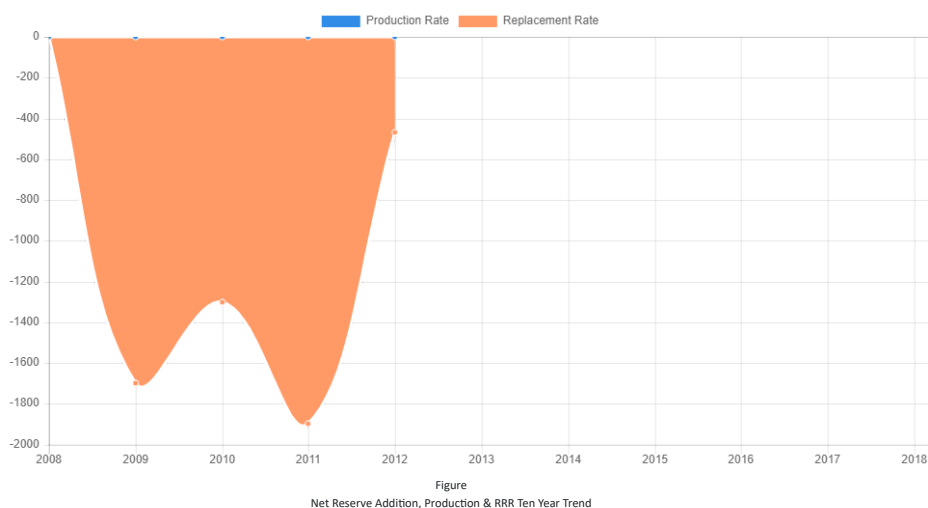
Table 6 shows an RRR of over 100% for the PSC and Marginal field contract type, the JV contract type had a positive RRR calculated at 14.71% while the Sole Risk had a negative RRR of -224.09%.

As of January 1, 2019, the RRR for Nigeria's Oil and Condensate reserves stood at 4.00%. Though this shows a positive RRR, it is not an impressive performance as just 4% of the 2018 annual production was replaced via

net addition to reserves. The ideal scenario is when we have a 100% RRR, i.e replace reserves at the same production rate. Table 7 below shows a nine-year trend of National RRR figures.

**Table 11 : Nigeria's Reserves Replacement Rate - RRR - Nine Year Trend**

Year	Oil & Condensate Production, MMB	Reserves Replacement Rate, % Barrels
01/Jan/2008	0.00	0.00
01/Jan/2009	0.00	0.00
01/Jan/2010	0.00	0.00
01/Jan/2011	0.00	0.00
01/Jan/2012	0.00	0.00
01/Jan/2013	0.00	0.00
01/Jan/2014	0.00	0.00
01/Jan/2015	0.00	0.00
01/Jan/2016	0.00	0.00
01/Jan/2017	0.00	0.00
01/Jan/2018	0.00	0.00



The national gas reserves stood at 200.79 TCF as at January 01, 2019 with an Associated Gas (AG) and Non-Associated Gas (NAG) reserves split of 101.98 TCF and 98.81TCF respectively based on aggregated Reserves report from E&P companies. With a 2018 gas annual production of 2.18 TCF, the gas Reserves Life Index (RLI) is 92 years.

**Table 12 : Natural Gas Reserves**

Associated Gas (TCF)	Non Associated Gas (TCF)	Total Gas (TCF)
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There was a 3.88 TCF gross addition and a 1.7TCF net addition to the gas reserves of 199.09 TCF as at 01.01.2018. This translates to an increase of 0.85% and a Reserves Replacement Ratio (RRR) of 8/2.

**Table 13 : Natural Gas Reserves**

Year	Associated Gas (TCF), as at Dec 2018	Non Associated Gas (TCF), as at Dec 2018	Total Gas (TCF), as at Dec 2018
2010	92.945	89.872	182.817
2011	92.904	90.530	183.434
2012	89.729	92.529	182.258
2013	89.652	92.298	181.950
2014	90.094	97.904	187.998
2015	97.208	94.857	192.065
2016	97.253	101.485	198.738
2017	96.360	102.730	199.090

Total Gas Reserves as at 1-Jan-2018 vs 1-Jan-2019

Natural Gas Reserves

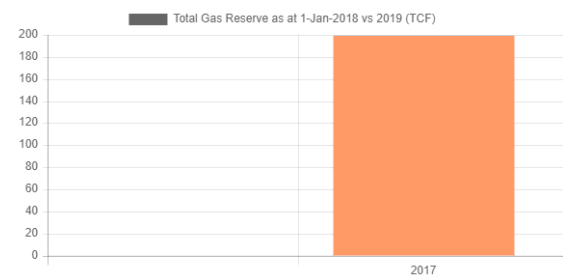


Figure  
Total Gas Reserves

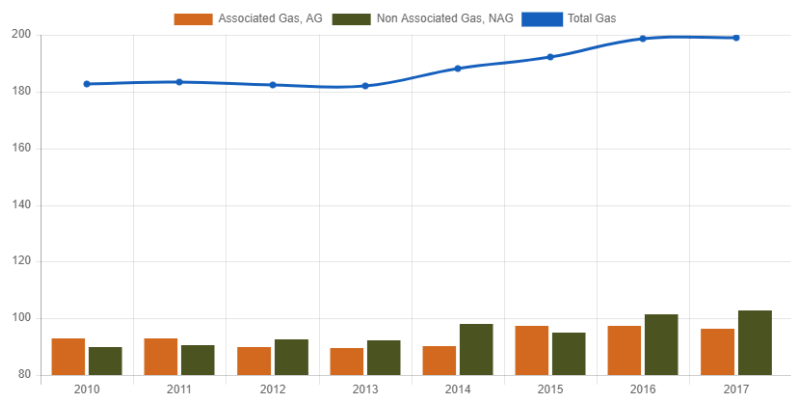


Figure  
Natural Gas Reserves Yearly Trend

**Table 14 : Seismic Data Acquisition**

Year	Type	Land	Shallow Offshore	Deep Offshore	Total
2018	3-D, Sq.Km				0
2017	3-D, Sq.Km	775.61	735.28	887.10	2397.99
2016	3-D, Sq.Km	138.50	156.00	0.00	294.5
2015	3-D, Sq.Km	675.80	775.50	455.51	1906.81
2014	3-D, Sq.Km	804.35	2833.03	572.00	4209.38
2013	3-D, Sq.Km	1588.08	1690.24	961.81	4240.13
2012	3-D, Sq.Km	1913.00	568.24	1742.29	4223.53
2011	3-D, Sq.Km	638.27	1127.59	0.00	1765.86
2010	3-D, Sq.Km	1300.94	841.28	2672.79	4815.01
2009	3-D, Sq.Km				0
2008	3-D, Sq.Km				0

Twenty-six (26) Field Development Plans (FDPs) were approved during the year, with expected reserves addition of over 3 billion barrels.

**Table 15 : Approved 2018 Field Development Plans**

#	Company	Field	Anticipated Production Rate (Bopd/MMscf/d)	Expected Reserves (MMSTB/BSCF)	Commencement Date	Remarks/Status
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**Table 16 : Number of Wells drilled by Terrain**

Year	Land / Swamp	Shallow Offshore	Deep Offshore	Total
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0
2013	42	35	68	145
2014	0	0	0	0
2015	0	0	0	0
2016	0	0	0	0
2017	0	0	0	0
2018	0	0	0	0

**Table 17 : Wells Drilled by Contract and Class in**

Contract	Exploratory	Appraisal(1st & 2nd)	Ordinary Appraisal	Development	Total
SC	0	0	0	0	0
SR	0	0	0	0	0
MF	0	0	0	0	0
JV	0	0	0	0	0



Contract	Exploratory	Appraisal(1st & 2nd)	Ordinary Appraisal	Development	Total
PSC	0	0	0	0	0
Total	0	0	0	0	0

**Table 18 : Number of Wells drilled by Class**

Year	Exploratory	Appraisal(1st & 2nd)	Ordinary Appraisal	Development	Total
2009	0	0	0	0	0
2010	0	0	0	0	0
2011	0	0	0	0	0
2012	0	0	0	0	0
2013	23	68	19	35	145
2014	0	0	0	0	0
2015	0	0	0	0	0
2016	0	0	0	0	0
2017	0	0	0	0	0
2018	0	0	0	0	0

**Table 19 : Wells Completed in**

Type of Contract	Total	By Terrain
Service Contract (SC)	0	
Sole Risk (SR)	0	
Marginal (MF)	0	
Joint Venture (JV)	0	
Production Sharing Contract (PSC)	0	
Total	0	

In-line with government aspirations to develop more gas for the domestic and export market, the year under review saw the approval of six (6) Non-Associated Gas and eighteen (18) Associated Gas development plans.

**Table 20 : Approved Non-Associated Gas - NAG Development Plans**

#	Company	Block	FDP	Gas Reserves (BSCF)	Condensate(MMSTB)	Gas Off-Take Rate (MMSCFD)
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**Table 21 : Approved Associated Gas - AG Development Plans**

#	Company	Block	FDP	AG Reserves, Bscf	Gas Off-Take Rate (MMSCFD)
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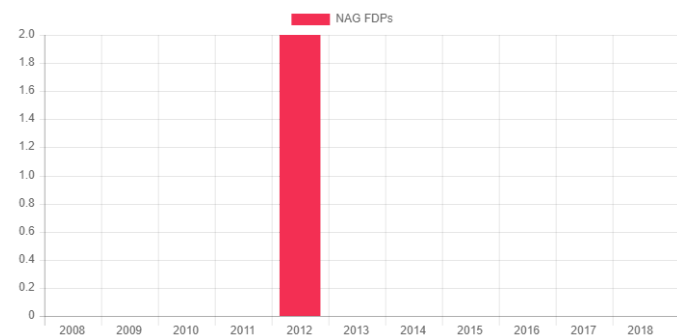


Figure  
Approved NAG Field Development Plans



Figure  
Approved AG Field Development Plans

Table 22 : New Drill Gas Appraisal/ Development Wells

#	Company	Block/Field	Wellname/Status	Terrain	Reserves, Bscf	Off-Take (MMScf/d)
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Table 23 : Approved Gas Well Initial Completion

#	Company	Block/Field	Well/Status	Reserves, Bscf	Off-Take (MMScf/d)	Processing Facility
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Table 24 : Approved Gas Wells Work-Over Operations

#	Company	Block	Well Name	Processing Facility
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Twenty-three (23) rigs were reported in the year under review. Out of these, four (4) rigs operated in the Deep Offshore terrain, fourteen (14) onshore (land and swamp), and five (5) in the shallow offshore terrain. Twenty-four (4) rigs were licensed during the year.

Table 25 : Rig Disposition by Terrain from January to December

Terrain	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total	0	0	0	0	0	0	0	0	0	0	0	0

Table 26 : Active Rigs by Terrain

Year	Land / Swamp	Shallow Offshore	Deep Offshore	Total
2008	0			0
2009	0			0
2010	0			0
2011	0			0
2012	6	3	3	12
2013	0			0
2014	0			0
2015	0			0
2016	0			0
2017	0			0
2018	0			0

The total number of fields (producing) as at the end of December, 2018 stands at two hundred and thirty two (232) for the forty seven (47) oil producing companies and these are made up of two thousand, six hundred and sixteen (2,616) wells producing from two thousand, nine hundred and thirty nine(2,939) strings. The table below presents a summary of producing and non-producing fields as at December 2018.

Table 27 : Fields Summary

#	Company	Contract TType	Producing Field	Well Name	String Name
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In 2018, a total of 773,825,133 barrels of oil was produced at an estimated daily average production of 2.12 million barrels of oil per day, which is 2.4% over the average for the year 2017. This volume was produced by forty-seven (47) oil producing companies as shown in the table/chart below:

Table 28 : Production Performance

Company	Fields	Contract	Terrain	Annual Prod (Bbls)	Daily Ave (Bopd)	% Prod
Total				1.00	1.00	0.0%

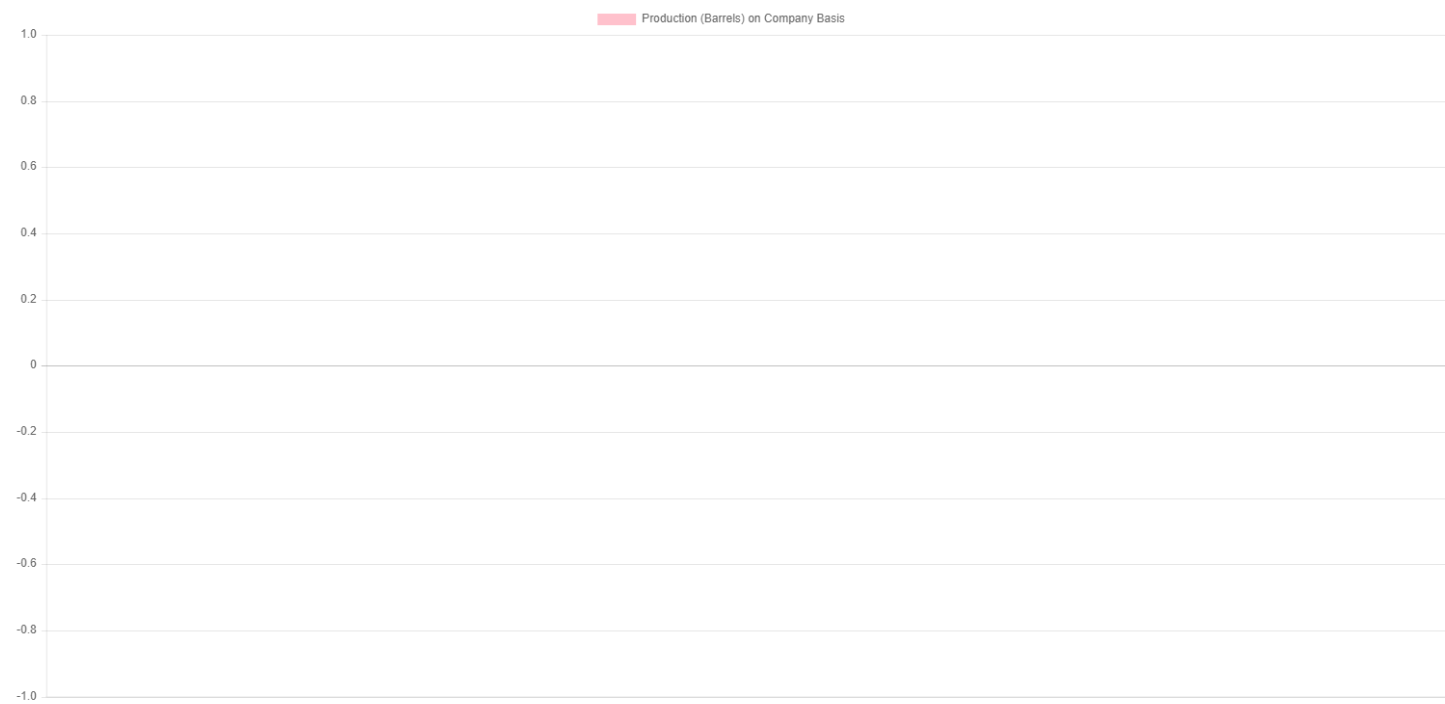


Figure  
Oil Production on Company Basis  
000000000000

Table 29 : Monthly Production (Provisional)

Month	Production (Bbls)	Average Daily Production (Bopd)
January	0.00	0.00
February	0.00	0.00
March	0.00	0.00
April	0.00	0.00
May	0.00	0.00
June	0.00	0.00
July	0.00	0.00
August	0.00	0.00
September	0.00	0.00
October	0.00	0.00
November	0.00	0.00
December	0.00	0.00
Total Annual Production (Bbls)	0.00	
Average Annual Daily Production (bopd)		0

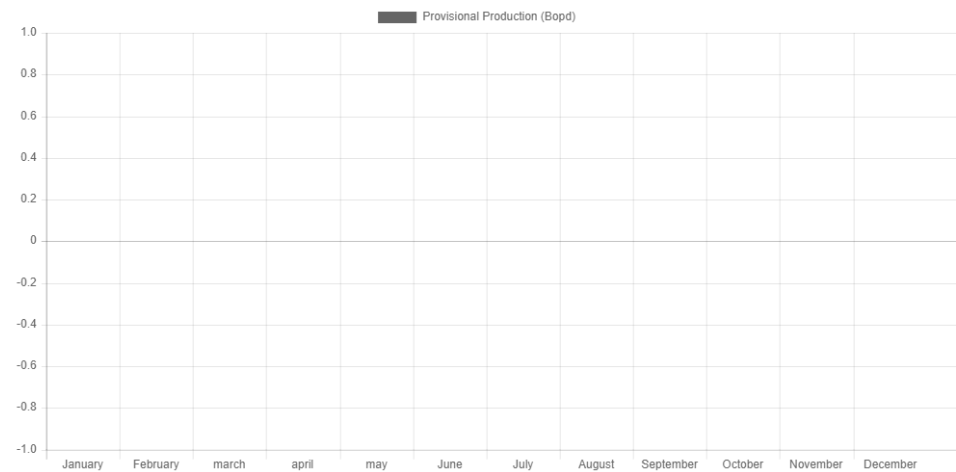


Figure  
Oil Production on Company Basis

Table 30 : Production by Contract

Figure  
Percentage Distribution of Production (Bopd)

The average production deferment for 2018 was 591,869 bopd. Deferments are attributed to shut down arising mainly from pipeline vandalism and some operational issues. The table below shows the summary of monthly deferments from all producing companies in 2018.

Table 31 : Summary of Production Deferments

Deferments		
Month	Cumulative Production (Bbls)	Daily Production (Bopd)
Total Deferment (BBLS)		0.00
Average Daily Deferment (BOPD)		0.00

Table 32 : Monthly Summary of Stabilized Crude / Condensate Volumes by Streams

Table 33 : Summary of Stabilized Crude / Condensates Volumes by Streams in Barrels

Stream/Blend	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crude Oil										
Abo	0.00	11,145,508.00	10,384,452.00	8,489,519.00	8,022,897.00	8,010,447.00	8,062,126.00	7,040,035.00	4,933,672.00	0.00
Agbami	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ajapa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Aje	0.00	0.00	0.00	0.00	0.00	0.00	0.00	988,806.00	912,870.00	0.00
Akpo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Antan	0.00	19,108,971.00	14,549,317.00	18,664,426.00	19,800,170.00	17,722,615.00	15,368,208.00	11,810,752.00	9,085,269.00	0.00
Asaramaturu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bonga	0.00	65,026,519.00	52,296,510.00	64,067,957.00	50,904,162.00	58,238,730.00	70,030,598.00	74,452,762.00	61,197,298.00	0.00
Bonny	0.00	91,633,924.00	98,768,246.00	85,516,915.00	64,667,075.00	77,754,783.00	68,599,843.00	69,528,856.00	66,505,640.00	0.00
Bonny NLNG	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,876,917.00	0.00	0.00
Brass	0.00	47,045,801.00	45,985,280.00	38,431,091.00	31,339,246.00	36,494,930.00	39,120,881.00	32,052,323.00	32,361,561.00	0.00
BRT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ebok	0.00	0.00	3,055,560.00	11,116,943.00	12,845,312.00	10,159,963.00	10,254,615.00	7,868,681.00	6,656,084.00	0.00
Egina	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ekanga Zaffiro	0.00	4,500,450.00	4,500,450.00	4,512,780.00	4,104,610.00	4,073,185.00	3,700,353.00	3,258,927.00	1,897,507.00	0.00
Erha	0.00	60,729,787.00	53,063,950.00	45,680,658.00	37,657,596.00	36,159,774.00	33,469,916.00	45,757,675.00	45,145,584.00	0.00
Escravos	0.00	95,476,023.00	90,252,503.00	82,992,947.00	75,172,726.00	70,697,665.00	62,999,068.00	59,599,265.00	61,318,649.00	0.00
Forcados	0.00	69,232,152.00	82,774,072.00	72,439,141.00	71,000,791.00	67,932,792.00	68,782,929.00	14,160,105.00	57,617,372.00	0.00
Ima	0.00	0.00	0.00	0.00	0.00	560,856.00	516,972.00	285,237.00	0.00	0.00
Jones Creek Blend	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Odudu	0.00	40,847,405.00	39,554,024.00	36,765,688.00	29,478,224.00	26,197,149.00	25,029,537.00	28,117,769.00	33,473,039.00	0.00
Okono	0.00	17,544,856.00	17,263,430.00	16,348,665.00	14,904,197.00	12,794,563.00	8,459,169.00	8,350,959.00	7,855,558.00	0.00
Okoro	0.00	5,885,411.00	5,767,803.00	6,170,120.00	6,601,054.00	6,011,655.00	4,294,703.00	3,474,331.00	3,581,709.00	0.00
Okwori	0.00	14,387,558.00	12,819,504.00	12,094,784.00	9,532,752.00	8,204,342.00	6,521,371.00	4,682,040.00	3,597,061.00	0.00
Okwuibome	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oso Condensate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Otakipo Blend	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,899,345.00	1,549,326.00	0.00
Oyo	0.00	3,216,242.00	1,349,224.00	1,009,842.00	812,467.00	421,171.00	1,777,052.00	1,992,927.00	1,959,653.00	0.00

Stream/Blend	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crude Oil										
Pennington	0.00	11,129,213.00	10,558,221.00	9,102,862.00	7,357,435.00	5,505,439.00	4,719,541.00	5,432,225.00	6,634,572.00	0.00
QIT	0.00	0.00	0.00	29,409,511.00	39,191,544.00	44,520,502.00	39,387,436.00	37,385,444.00	0.00	0.00
Qua Iboe	0.00	126,157,671.00	128,253,257.00	128,852,443.00	130,674,938.00	134,956,728.00	126,774,069.00	79,205,809.00	82,664,458.00	0.00
Sea Eagle	0.00	29,746,886.00	23,080,837.00	21,075,517.00	15,626,909.00	7,206,421.00	14,013,061.00	10,948,405.00	9,115,405.00	0.00
Tulja	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	13,290,945.00	0.00
Ughelli Blend	0.00	0.00	0.00	0.00	41,668.00	0.00	0.00	0.00	0.00	0.00
Ukpokiti	0.00	492,411.00	386,832.00	927,491.00	756,259.00	565,887.00	334,956.00	229,576.00	2,323,880.00	0.00
Usan	0.00	0.00	1,326,212.00	1,622,834.00	2,985,561.00	4,762,983.00	6,815,676.00	7,820,692.00	35,645,714.00	0.00
Yoho	0.00	33,368,770.00	30,371,559.00	27,685,727.00	25,141,246.00	19,315,490.00	17,345,249.00	15,849,577.00	11,639,687.00	0.00
Sub Total	0.00	746,675,558.00	726,361,243.00	722,977,861.00	658,618,839.00	658,268,070.00	636,377,329.00	536,069,440.00	560,962,513.00	0.00
Daily Average	0.00	2,045,686.46	1,990,030.80	1,980,761.26	1,804,435.18	1,803,474.16	1,743,499.53	1,468,683.40	1,536,883.60	0.00
Condensate										
Field Condensate										
Agbami	0.00	87,169,459.00	88,304,428.00	85,041,559.00	84,871,128.00	87,280,118.00	85,339,585.00	83,835,468.00	85,697,436.00	0.00
Ajapa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	135,080.00	444,885.00	0.00
Akpo	0.00	60,210,985.00	56,482,856.00	56,651,708.00	61,102,205.00	55,311,051.00	55,503,303.00	49,847,029.00	45,145,907.00	0.00
Escravos	0.00	1,892,148.00	4,041,513.00	5,088,278.00	4,896,351.00	6,169,358.00	10,080,271.00	3,666,394.00	5,655,185.00	0.00
Ima	0.00	537,469.00	531,515.00	246,582.00	259,429.00	312,053.00	295,976.00	367,864.00	376,748.00	0.00
Oso Condensate	0.00	5,200,300.00	4,748,331.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total	0.00	155,010,361.00	154,108,643.00	147,028,127.00	151,129,113.00	149,072,580.00	151,219,135.00	137,851,835.00	137,320,161.00	0.00
Daily Average	0.00	424,685.92	422,215.46	402,816.79	414,052.36	408,418.03	414,299.00	377,676.26	376,219.62	0.00
Plant Condensate										
Bonny NLNG	0.00	10,095,699.00	13,194,065.00	13,042,415.00	9,696,678.00	11,037,805.00	10,080,271.00	9,800,933.00	11,107,378.00	0.00
BRT	0.00	3,669,899.00	2,909,182.00	2,735,997.00	3,210,878.00	3,501,352.00	3,237,235.00	3,049,758.00	2,075,512.00	0.00
Sub Total	0.00	13,765,598.00	16,103,247.00	15,778,412.00	12,907,556.00	14,539,157.00	13,317,506.00	12,850,691.00	13,182,890.00	0.00
Daily Average	0.00	37,713.97	44,118.48	43,228.53	35,363.17	39,833.31	36,486.32	35,207.37	36,117.51	0.00
Sub Total - Condensate	0.00	168,775,959.00	170,211,890.00	162,806,539.00	164,036,669.00	163,611,737.00	164,536,641.00	150,702,526.00	150,503,051.00	0.00
Daily Average	0.00	462,399.89	466,333.95	446,045.31	449,415.53	448,251.33	450,785.32	412,883.63	412,337.13	0.00
Crude + Condensate										
Grand Total - Condensate	0.00	915,451,517.00	896,573,133.00	885,784,400.00	822,655,508.00	821,879,807.00	800,913,970.00	686,771,966.00	711,465,564.00	0.00
Daily Average	0.00	2,508,086.35	2,456,364.75	2,426,806.58	2,253,850.71	2,251,725.50	2,194,284.85	1,881,567.03	1,949,220.72	0.00

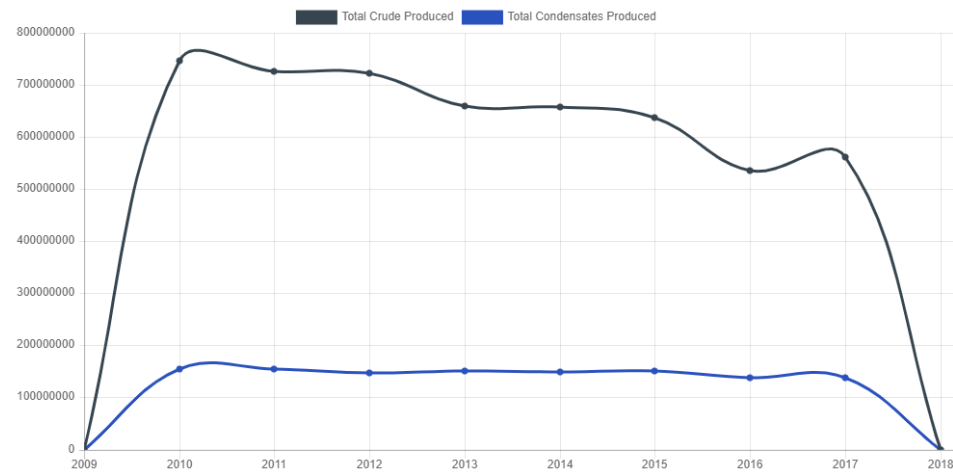


Figure  
Stabilized Crude /Condensates Volumes

Table 34 : Status Of Major Active Field Development / Crude Oil Handling Facilities Projects

#	Project	Company	Location	Addition (Mbopd)	Development	Completion Year	Status
1	Bonga Southwest (BSW) Aparo						
2	Agbami Infill Drilling (AIDP)						Detailed Engineering
3	Tapa Production Upgrade						Detailed Engineering
4	South Offshore Area Produced Water Project						
5	Dibi Complete Restoration						Detailed Engineering
6	Antan Well Head Platform						Detailed Engineering

#	Project	Company	Location	Addition (Mbopd)	Development	Completion Year	Status
7	FSO unity Cargo Tanks replacement						
8	Wash Tank 3 Replacement Project, Obogwu Flowstation						Detailed Engineering
9	OML 58 Condensate Spiking						
10	Alakiri Flow Station XHP Separator Installation/Commissioning						
11	Robertkiri Crude Oil Dehydration Capacity Expansion						
12	Ibot Satellite Fields Development Phase 2						Detailed Engineering
13	Idoho BP Restoration						Detailed Engineering
14	Usari Alternate Development						Detailed Engineering
15	Ubit PP Restoration						Installation/Construction
16	Debottlenecking and Upgrade of Egbaoma Flow station						
17	Otakikpo Field Early Production Facility						Installation/Construction
18	Further Oil Development Project – Phase 1						Installation/Construction
19	Facilities Modification of Existing 2-phase separator to 3-phase separator for in-field dehydration (IFD) system deployment on flowstations in OML 18						
20	OML 99 Ikike Field Development						Detailed Engineering
21	Anyala and Madu Fields OML 83/85						Detailed Engineering
22	Sapele further Oil Development Project.						
23	100,000bbl Crude Oil Buffer Storage Tank - OML 20 Egbema Fields						
24	Modification of Oil Water Treatment Facility at Amenam Kpono						
25	Escravos Crude Oil Tank Repairs and Upgrade Project						
26	Crude Oil Storage Tank 5 Project						
27	Construction of 100KB Crude Oil Buffer Tank in Egbema Field	NPDC/SEPLAT					
28	Upgrade of Ebendo Flowstation Facility						
29	2Trains x 20,000BPD Otakikpo Flow station Production Facility Project.						
30	Tubu Field Development and Langley Upgrade.						
31	JV Skim Pile Upgrade Project						
32	JV Fibre Optics Project						
33	Eriemu 11T Surface Facility Equipment in Eriemu Field (OML 30)	NPDC/SEPLAT					
34	Replacement of Dehydration Tanks at Ogini Flowstation in OML 26	NPDC/SEPLAT					Detailed Engineering
35	Certification & Commissioning of Ocean Patriot as Accommodation Platform						Valid
36	Offshore Platform Planned to be used for re-entry of Ogedeh-1 Well.	BICTA ENERGY & MANAGEMENT SYSTEMS LIMITED					
37	20,000 barrels Crude Oil Storage Tank						
38	Revamp of Adanga Complex						
39	Gbetiokun Early Production Facility (EPF)	NPDC/SEPLAT					
40	'Preowei Deepwater Development Project						
41	Offshore Platform Project in Gulf of Guinea.						
42	1MM Barrels Onshore Crude Oil Storage Facility.						Detailed Engineering
43	Egwa Early Production Facility (EPF)	NPDC/SEPLAT					
44	Tank 8 DED approval package	CHEVRON NIGERIA LTD.					Detailed Engineering

**Table 35 : Gas Production Volumes in MMSCF**

Month	AG	NAG	Total Gas Produced
January	0.00	0.00	0.00
Febuary	0.00	0.00	0.00
march	0.00	0.00	0.00
april	0.00	0.00	0.00
may	0.00	0.00	0.00
June	0.00	0.00	0.00
July	0.00	0.00	0.00
August	0.00	0.00	0.00
September	0.00	0.00	0.00
October	0.00	0.00	0.00
November	0.00	0.00	0.00
December	0.00	0.00	0.00
Total	0.00	0.00	0.00

The total volume of gas produced in the year 2018 was 2.91TCF. This averaged a daily production rate of 7.97BCF/D. Of the produced gas volumes, an average of 4.70BCF/D was produced along with oil as Associated Gas while 3.27BCF/D was produced as Non-Associated Gas. These represent 59.01% and 40.99% of total gas production respectively during the year under review.

**Table 36 : Gas Production,**

Year	AG	NAG	Total
2003	0.00	0.00	0.00
2004	0.00	0.00	0.00
2005	0.00	0.00	0.00
2006	0.00	0.00	0.00
2007	0.00	0.00	0.00
2008	0.00	0.00	0.00
2009	0.00	0.00	0.00
2010	0.00	0.00	0.00
2011	0.00	0.00	0.00
2012	0.00	0.00	0.00
2013	1,786,512,899.00	1,025,377,681.00	2,811,890,580.00
2014	1,880,374,658.00	1,168,171,828.00	3,048,546,486.00
2015	1,717,673,083.00	1,285,505,977.00	3,003,179,060.00
2016	1,517,667,415.00	1,194,135,621.00	2,711,803,036.00
2017	1,701,041,508.00	1,237,008,033.00	2,938,049,541.00
2018	0.00	0.00	0.00

The production volume of 2.91TCF in 2018 was a slight drop from that in the year 2017 which was 2.94TCF. This was due to a 3.61% drop in Non-Associated Gas production, which tended to hide the 1% increase in AG production for 2018.

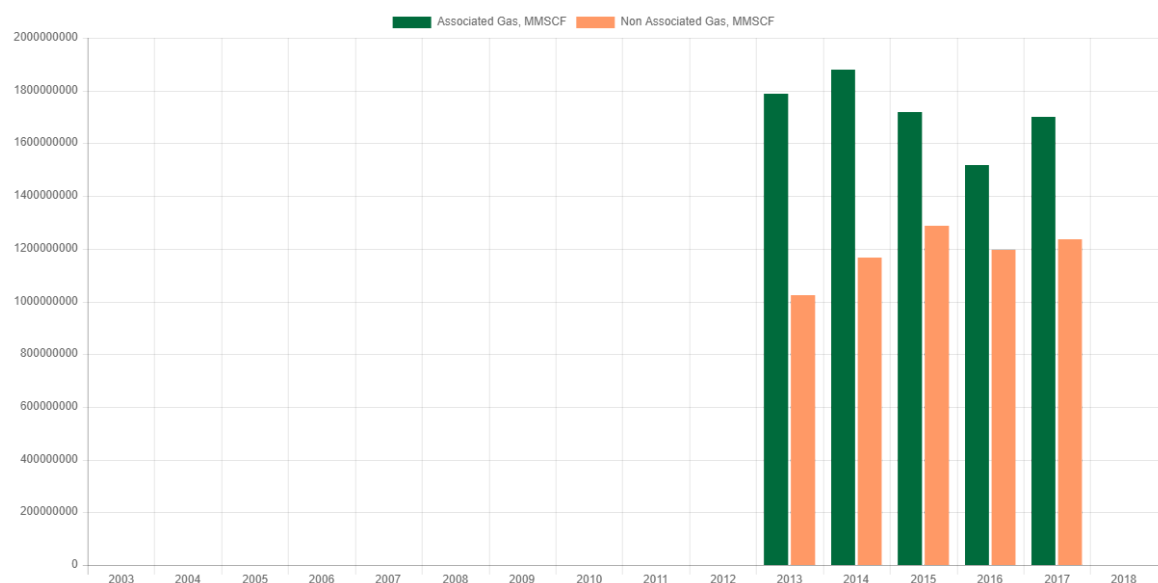
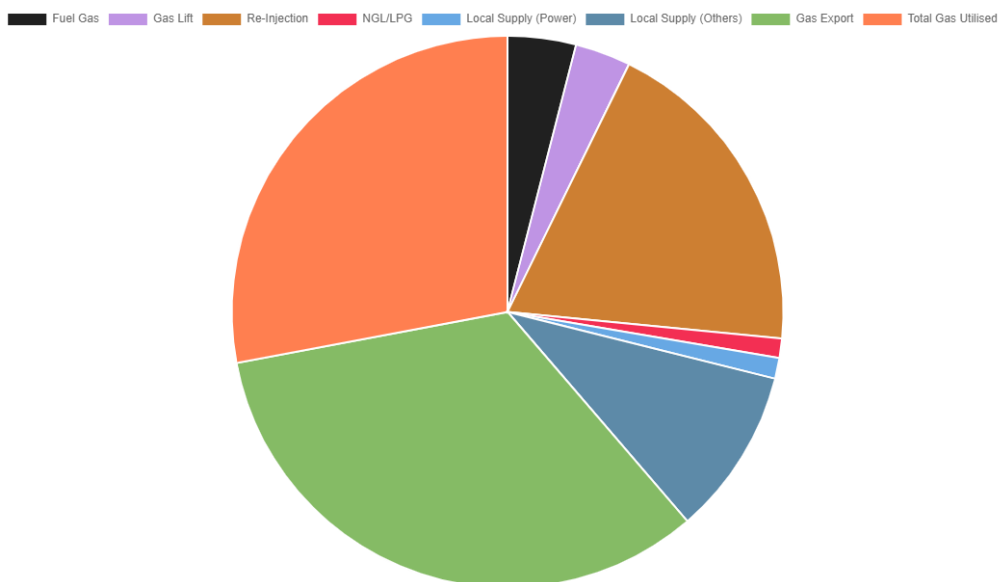


Figure  
AG and NAG Production, 2002 - 2018

**Table 37 : Gas Utilization Profile for the year**

Gas Utilization	Volume (MMscf)	Utilization Factor (%)
Fuel Gas	144492186.4	5.61
Gas Lift make-up	117462540.4	4.56
Gas Re-injection	694794450.5	26.99
NGL/LPG Feed Gas	40968779.8	1.59
Local Supply (Power)	43975144.5	1.71
Local Supply (Others)	353127807.3	13.72
Gas Export	1202382925.8	46.70
Total Gas Utilised	1566589898.3	60.85



In the year 2018, a total of 2.6TCF (88.96%) of gas was utilized. Gas utilization by the Companies were for inhouse gas consumption, sales to the domestic and export markets.

#### Gas Flare Report

In the year under review, a total of 321.29BSCF of produced Associated Gas was flared. This volume represents 11.04% of produced Gas.

**Table 38 : Gas Production and Utilization Summary**

Month	Total Gas Produced	Total Gas Utilised	Total Gas Flared	% Flared
January	0.00	222,946,694.42	-222,946,694.42	0.00
February	0.00	212,405,975.03	-212,405,975.03	0.00
march	0.00	226,894,599.05	-226,894,599.05	0.00
april	0.00	215,880,010.65	-215,880,010.65	0.00
may	0.00	216,320,476.00	-216,320,476.00	0.00
June	0.00	187,329,111.87	-187,329,111.87	0.00
July	0.00	213,261,895.93	-213,261,895.93	0.00
August	0.00	232,790,643.68	-232,790,643.68	0.00
September	0.00	217,100,909.46	-217,100,909.46	0.00
October	0.00	221,968,365.98	-221,968,365.98	0.00
November	0.00	186,959,510.38	-186,959,510.38	0.00
December	0.00	220,777,048.77	-220,777,048.77	0.00
TOTAL	0.00	2,574,635,241.22	-2,574,635,241.22	0.00

A better way to understand the progress made in our bid to achieve zero gas flare is to view them side by side with AG production. The table shows a near 1% reduction in gas flaring for 2018.

Below is a chart showing the historical Gas production, utilization and flare profile from 1958 till 2018. It shows that the gas sector is about to attain 100% utilization.

**Table 39 : Flare Volume as a percentage of AG Production**

Year	AG Produced Mscf	Total Gas Flared Mscf	% Flared
1998	0.00	0.00	0.00
1999	0.00	0.00	0.00
2000	0.00	0.00	0.00
2001	0.00	0.00	0.00
2002	0.00	0.00	0.00
2003	0.00	0.00	0.00
2004	0.00	0.00	0.00
2005	0.00	0.00	0.00
2006	0.00	0.00	0.00
2007	0.00	0.00	0.00
2008	0.00	0.00	0.00
2009	0.00	763,248,638.96	0.00
2010	0.00	539,424,578.46	0.00

Flare Volume as a percentage of AG Production



Year	AG Produced Mscf	Total Gas Flared Mscf	% Flared
2011	0.00	503,944,276.83	0.00
2012	0.00	480,444,658.82	0.00
2013	1,786,512,899.00	423,150,945.41	23.69
2014	1,880,374,658.00	346,383,151.27	18.42
2015	1,717,673,083.00	331,086,672.89	19.28
2016	1,517,667,415.00	289,318,482.74	19.06
2017	1,701,041,508.00	324,223,483.26	19.06
2018	0.00	321,290,343.23	0.00

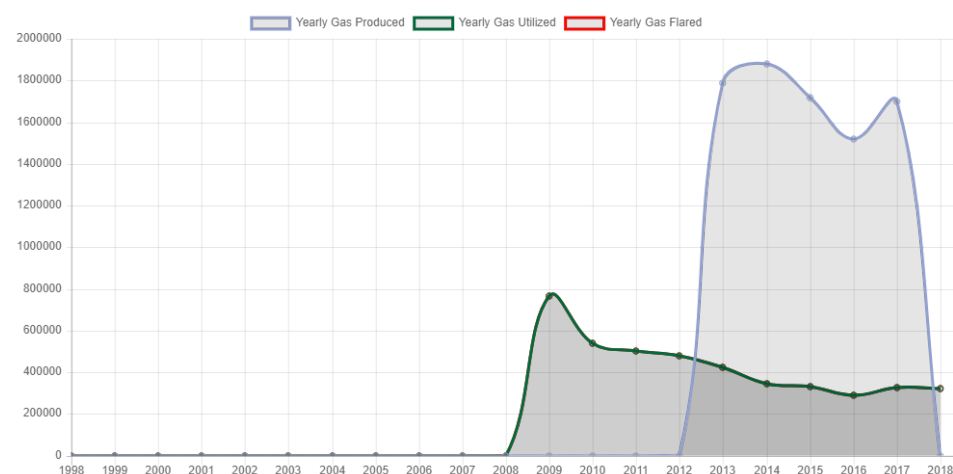
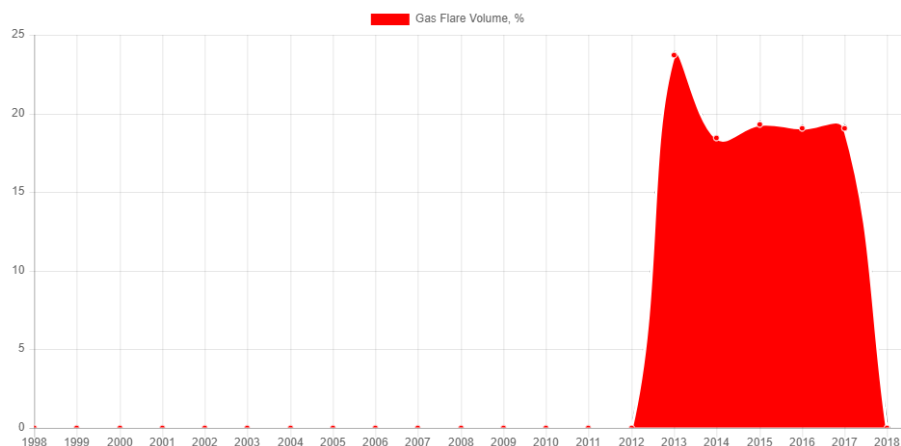


Figure  
Historical Gas Profile (Billion Standard Cubic Feet, BSCF)

Table 40 : Summary of 2018 Gas Production and Utilization

Month	Production						Sales							
	AG	NAG	Total	Fuel Gas	Gas Lift	Re-Injection	NGL-LPG	Gas To Nipp	Others	NLNG Export	Gas Util	% Util	Gas Flared	% Flared
January	0.00	0.00	0.00	12,786,320.70	9,166,126.20	61,835,697.40	3,160,410.40	4,620,297.40	25,013,577.20	108,067,992.90	222,946,694.42	0.00	34,775,655.85	100.00
Febuary	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
march	0.00	0.00	0.00	11,879,325.30	8,709,886.80	59,260,096.90	4,715,381.20	4,939,519.00	31,949,024.40	107,567,928.40	226,894,599.05	0.00	27,831,324.13	100.00
april	0.00	0.00	0.00	12,070,035.30	9,616,973.20	57,083,991.50	3,433,571.30	4,441,481.00	30,527,229.60	100,764,515.70	215,880,010.65	0.00	24,942,450.16	100.00
may	0.00	0.00	0.00	11,949,950.20	9,176,294.20	57,026,334.80	3,207,189.70	4,303,262.50	28,644,080.10	104,362,840.20	216,320,476.00	0.00	22,624,575.80	100.00
June	0.00	0.00	0.00	11,482,885.50	8,206,572.20	57,810,107.80	2,940,520.10	3,903,513.00	27,945,713.90	76,089,098.60	187,329,111.87	0.00	22,684,755.91	100.00
July	0.00	0.00	0.00	12,714,700.90	10,184,172.10	63,293,866.90	3,889,460.00	4,212,605.40	30,454,300.30	90,486,764.20	213,261,895.93	0.00	24,451,545.03	100.00
August	0.00	0.00	0.00	12,509,706.80	17,573,190.50	57,877,803.80	5,736,427.60	1,864,239.00	29,028,252.60	110,155,977.30	232,790,643.68	0.00	26,622,101.67	100.00
September	0.00	0.00	0.00	12,320,688.40	8,331,617.50	59,415,426.00	3,442,658.70	2,846,274.00	24,631,228.80	107,173,272.50	217,100,909.46	0.00	24,169,228.31	100.00
October	0.00	0.00	0.00	12,797,548.00	9,571,278.50	64,855,538.30	2,321,076.00	3,093,545.00	30,163,686.20	101,240,173.80	221,968,365.98	0.00	25,771,038.22	100.00
November	0.00	0.00	0.00	10,637,389.50	8,584,046.60	49,596,968.80	2,320,628.00	3,066,473.00	31,181,116.70	83,721,873.90	186,959,510.38	0.00	27,746,055.02	100.00
December	0.00	0.00	0.00	12,143,873.10	8,858,632.10	50,074,399.30	2,209,473.40	3,009,414.30	34,855,030.80	111,837,174.80	220,777,048.77	0.00	29,757,779.80	100.00
Total	0.00	0.00	0.00	133,292,423.70	107,978,789.90	638,130,231.50	37,376,796.40	40,300,623.60	324,393,240.60	1,101,467,612.30	2,362,229,266.19	0.00	291,376,509.90	0.00

Table 41 : Summary of Gas Production and Utilization

Gas Production						Sales							
Year	AG	NAG	Total	Fuel Gas	Gas Lift	Re-Injection	NGL-LPG	Domestic Sales	NLNG Export	Gas Util	% Util	Gas Flared	% Flared

Gas Production				Sales									
Year	AG	NAG	Total	Fuel Gas	Gas Lift	Re-Injection	NGL-LPG	Domestic Sales	NLNG Export	Gas Util	% Util	Gas Flared	% Flared
2003	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
2004	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
2006	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
2009	0.00	0.00	0.00	86,749,248.60	49,442,406.60	542,408,371.10	33,193,526.50	190,095,307.50	462,402,257.60	1,450,574,930.22	0.00	763,248,638.96	100.00
2010	0.00	0.00	0.00	133,499,872.10	65,128,414.90	751,705,007.70	46,591,153.40	285,802,520.90	992,293,988.80	2,275,020,957.69	0.00	539,424,578.46	100.00
2011	0.00	0.00	0.00	139,425,042.10	91,970,753.60	703,579,859.90	53,201,835.50	344,481,029.00	1,114,860,568.70	2,447,519,088.59	0.00	503,944,276.83	100.00
2012	0.00	0.00	0.00	145,901,304.30	88,626,060.10	720,930,791.30	52,658,762.90	372,044,969.30	1,131,321,835.00	2,500,068,902.68	0.00	480,444,658.82	100.00
2013	1,786,512,899.00	1,025,377,681.00	2,811,890,580.00	151,588,583.10	53,216,309.60	756,379,361.00	57,974,830.20	276,171,032.70	964,809,782.50	2,260,122,438.85	80.38	423,150,945.41	19.62
2014	1,880,374,658.00	1,168,171,828.00	3,048,546,486.00	154,037,918.50	87,221,579.60	808,503,664.60	56,785,228.40	424,738,370.70	1,123,511,430.60	2,654,232,586.77	87.07	346,383,151.27	12.93
2015	1,717,673,083.00	1,285,505,977.00	3,003,179,060.00	152,879,152.20	84,395,058.60	743,028,073.40	59,775,984.90	445,121,438.80	1,160,836,318.30	2,646,068,394.51	88.11	331,086,672.89	11.89
2016	1,517,667,415.00	1,194,135,621.00	2,711,803,036.00	141,604,622.30	65,534,450.10	702,858,336.50	54,386,422.90	382,226,979.50	1,066,744,967.80	2,394,482,168.18	88.30	289,318,482.74	11.70
2017	1,701,041,508.00	1,237,008,033.00	2,938,049,541.00	145,980,633.40	89,398,487.50	707,140,079.30	48,457,686.60	430,414,812.10	1,197,455,971.30	2,588,818,336.12	88.11	324,223,483.26	11.89
2018	0.00	0.00	0.00	144,492,186.40	117,462,540.40	694,794,450.50	40,968,779.80	397,102,951.80	1,202,382,925.80	2,574,635,241.22	0.00	321,290,343.23	100.00

**Table 42 : Gas Production and Utilization by Company**

Gas Produced				Gas Sold										
Company	AG	NAG	Total	Fuel Gas	Gas Lift	Re-Injection	NGL-LPG	Gas To Nipp	Others	NLNG Export	Gas Util	% Util	Gas Flared	% Flared

**Table 43 : Summary of Crude / Condensate Export by Crude Stream**

Stream	January	February	March	April	May	June	July	August	September	October	November	December	Total
Oil													
Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily-Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Field Condensate													
Sub-Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily-Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oil + Condensate													
Total Export	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily-Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 44 : Summary of Crude / Condensate Export**

Stream/Blend	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Crude Oil										
Abo	0.00	21,318,140.33	20,002,189.58	15,944,489.33	15,282,570.42	8,298,092.00	8,184,624.00	6,981,146.00	4,967,452.00	0.00
Agbami	0.00	166,586,874.42	169,276,417.75	163,331,331.75	162,442,052.08	86,171,532.00	85,628,159.00	84,710,980.00	0.00	0.00
Ajapa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	128,874.00	0.00	0.00
Aje	0.00	0.00	0.00	0.00	0.00	0.00	0.00	922,703.00	822,669.00	0.00
Akpo	0.00	115,596,022.00	109,009,199.58	110,073,938.58	116,508,499.08	51,618,224.00	55,354,492.00	50,639,254.00	0.00	0.00
Antan	0.00	36,725,681.25	27,220,440.58	35,557,547.67	38,212,238.33	18,112,986.00	14,396,706.00	12,373,609.00	8,625,645.00	0.00
Asaramaturu	0.00	0.00	0.00	0.00	0.00	544,421.00	422,934.00	301,120.00	0.00	0.00
Bonga	0.00	124,703,019.58	98,971,116.00	123,209,330.58	97,477,888.92	58,282,931.00	69,715,081.00	74,973,146.00	61,371,978.00	0.00
Bonny	0.00	162,404,025.42	164,128,287.50	143,067,896.67	109,218,106.67	62,613,178.92	65,601,732.00	55,981,328.00	47,983,367.00	0.00
Brass	0.00	89,714,526.42	88,783,664.67	74,626,917.42	59,161,592.83	34,880,104.33	38,946,913.00	33,148,423.00	31,863,555.00	0.00
BRT	0.00	0.00	0.00	0.00	0.00	0.00	7,422,126.00	0.00	0.00	0.00
Ebok	0.00	0.00	5,046,368.67	21,242,738.67	25,144,067.67	9,772,103.00	10,274,484.00	7,989,189.00	6,773,005.00	0.00
Ekanga Zaffiro	0.00	0.00	0.00	0.00	0.00	3,763,224.00	3,710,955.00	3,832,897.00	1,943,624.00	0.00

[illegible]

Stream/Blend	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Antan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asaramaturu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bonga	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bonny	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brass	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
BRT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ebok	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ekanga Zaffiro	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Erha	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Escravos	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forcados	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ima	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Koko Plant	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Odudu	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Okono	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Okoro	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Okwori	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oso Condensate	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oyo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pennington	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
QIT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Qua Iboe	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SEEPCO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seplat Blend	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ukpokiti	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Usan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Yoho	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Grand Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Oil + Condensate										
Grand Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily Average	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 45 : Crude Export Destination Summary**

Stream	Africa	Asia and Pacific	Europe	Latin America	Middle East	Non-specified/Other	North America
Abo	0.00	0.00	0.00	0.00	0.00	0.00	
Agbami	0.00	0.00	0.00	0.00	0.00	0.00	
Ajapa	0.00	0.00	0.00	0.00	0.00	0.00	
Aje	0.00	0.00	0.00	0.00	0.00	0.00	
Akpo	0.00	0.00	0.00	0.00	0.00	0.00	
Antan	0.00	0.00	0.00	0.00	0.00	0.00	
Asaramaturu	0.00	0.00	0.00	0.00	0.00	0.00	
Bonga	0.00	0.00	0.00	0.00	0.00	0.00	
Bonny	0.00	0.00	0.00	0.00	0.00	0.00	
Bonny NLNG	0.00	0.00	0.00	0.00	0.00	0.00	
Brass	0.00	0.00	0.00	0.00	0.00	0.00	
BRT	0.00	0.00	0.00	0.00	0.00	0.00	
Ebok	0.00	0.00	0.00	0.00	0.00	0.00	
Erha	0.00	0.00	0.00	0.00	0.00	0.00	
Escravos	0.00	0.00	0.00	0.00	0.00	0.00	
Forcados	0.00	0.00	0.00	0.00	0.00	0.00	
Ima	0.00	0.00	0.00	0.00	0.00	0.00	
Indorama	0.00	0.00	0.00	0.00	0.00	0.00	
Koko Plant	0.00	0.00	0.00	0.00	0.00	0.00	
Odudu	0.00	0.00	0.00	0.00	0.00	0.00	
Okono	0.00	0.00	0.00	0.00	0.00	0.00	
Okoro	0.00	0.00	0.00	0.00	0.00	0.00	
Okwori	0.00	0.00	0.00	0.00	0.00	0.00	
Oyo	0.00	0.00	0.00	0.00	0.00	0.00	

Stream	Africa	Asia and Pacific	Europe	Latin America	Middle East	Non-specified/Other	North America
Pennington	0.00	0.00	0.00	0.00	0.00	0.00	
QIT	0.00	0.00	0.00	0.00	0.00	0.00	
Qua Iboe	0.00	0.00	0.00	0.00	0.00	0.00	
SEEPCO	0.00	0.00	0.00	0.00	0.00	0.00	
Tulja	0.00	0.00	0.00	0.00	0.00	0.00	
Ukpokiti	0.00	0.00	0.00	0.00	0.00	0.00	
Yoho	0.00	0.00	0.00	0.00	0.00	0.00	
Total	0.00	0.00	0.00	0.00	0.00	0.00	

**Table 46 : Crude Export Destination History in Percent**

Region	2014	2015	2016	2017	2018
Africa	0.0	7.2	0.0	5.6	0.0
Asia and Pacific	0.0	14.4	0.0	12.4	0.0
Europe	0.0	0.0	0.0	0.0	0.0
Latin America	0.0	5.1	0.0	1.5	0.0
Middle East	0.0	23.6	0.0	16.8	0.0
Non-specified/Other	0.0	0.0	0.0	0.0	0.0
North America	0.0	2.1	0.0	8.2	0.0

**Table 47 : Average Price of Nigeria's Crude Streams as Quoted by Platts in USD**

Year	Abo	Agbami	Bonny	Escravos	Brass	Forcados	Qua Iboe	Akpo	Bonga
2008	0	0	0	0	0	0	0	0	
2009	0	0	0	0	0	0	0	0	
2010	0	0	0	0	0	0	0	0	
2011	110.50	111.97	111.94	112.02	112.93	112.14	0.00	0.00	
2012	110.71	112.84	113.10	112.82	114.21	113.21	0.00	0.00	
2013	108.96	110.47	111.22	110.23	111.95	110.88	110.45	112.87	
2014	99.36	100.70	100.66	99.84	101.35	100.80	99.37	101.13	
2015	52.64	54.16	53.86	53.14	54.48	54.29	52.69	54.18	
2016	44.50	45.23	44.86	44.84	44.54	45.49	44.48	45.06	
2017	53.93	54.99	54.91	54.99	54.65	55.09	54.29	55.04	
2018	0	0	0	0	0	0	0	0	

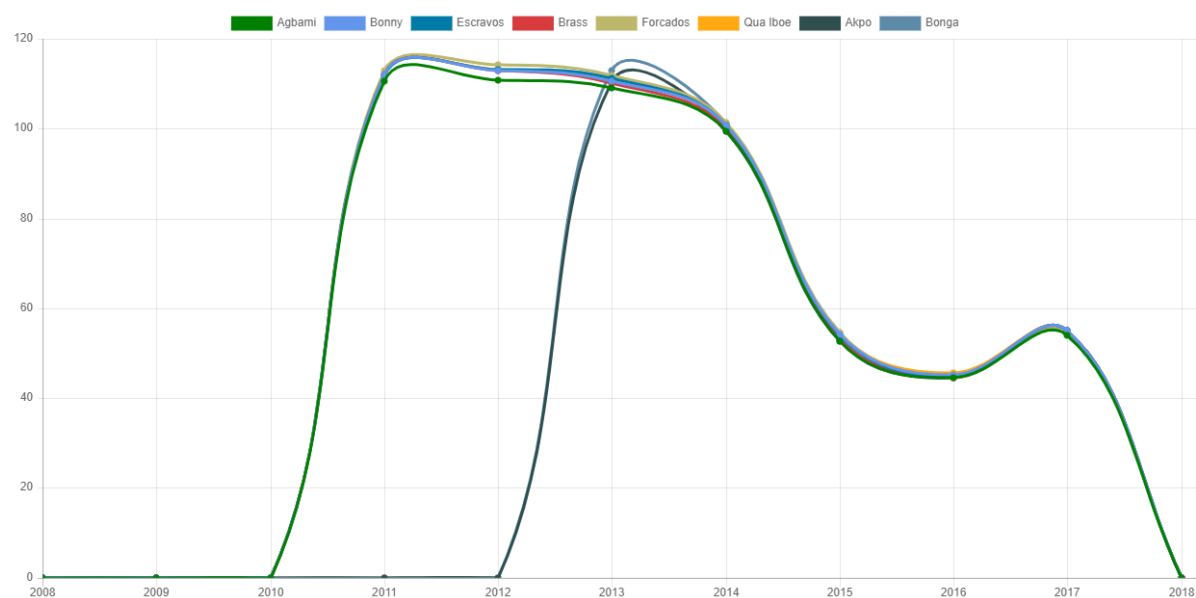


Figure  
Average Price of Nigeria's Crude Quoted by Platts in USD

Table 48 : Summary of Refineries

Process Unit	KRPC	PHRC (New)	PHRC (Old)	WRPC	NDPR	TOTAL
Refinery Intake						
Crude Oil (b/d)						
Q1	2,132.00	1,852.00	1,863.00	1,614.00	1,724.00	9,185.00
Q2	1,776.00	1,676.00	1,776.00	1,776.00	1,776.00	8,780.00
Q3	1,857.00	1,907.00	1,857.00	1,857.00	1,857.00	9,335.00
Q4	1,302.00	1,092.00	1,302.00	1,302.00	1,302.00	6,300.00
2018	1,766.75	1,631.75	1,699.50	1,637.25	1,664.75	8,400.00
Utilization Rate(%)						
Q1						
Q2						
Q3						
Q4						
2018						

Table 49 : Refinery Performance - Capacity Utilisation, BPSD

KRPC	PHRC (New)	PHRC (Old)	WRPC	NDPR	Total
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Table 50 : Refinery Performance Capacity Utilisation, Percentage

Year	KRPC	PHRC (New)	PHRC (Old)	WRPC	NDPR	Total
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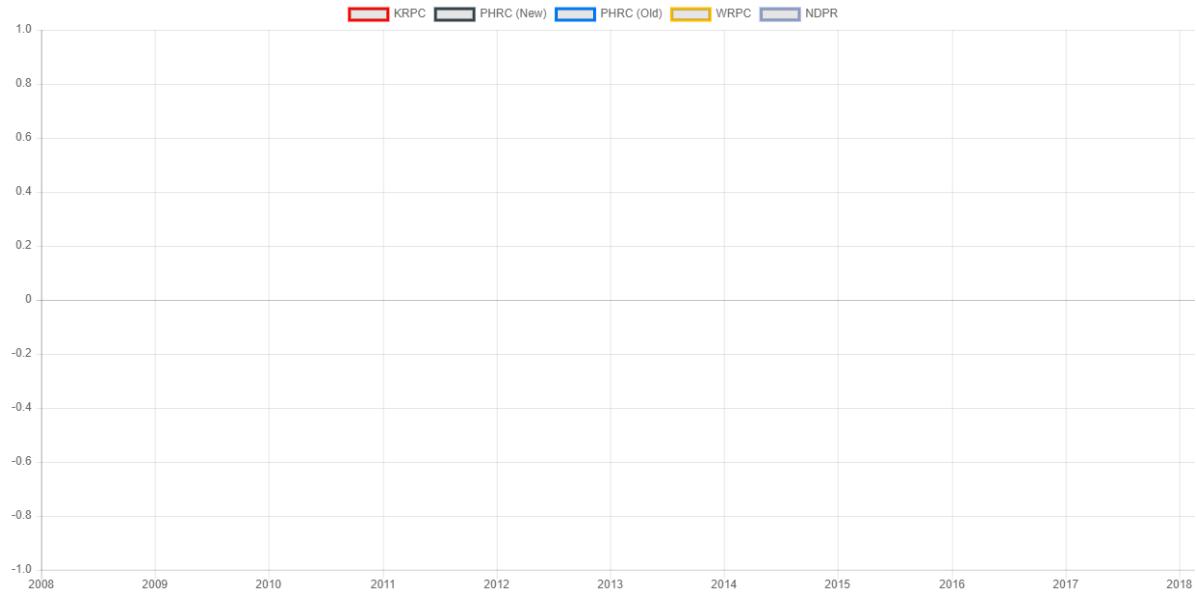


Table 51 : Status of Licensed Refinery Projects

#	company	Project Type	Capacity (BSPD)	Location	Planned Commission Date
1		Conversion	456	BISENI	2019
2		Conversion	5000	KORONAMA	2019
3		Modular	3090	TAYLOR-CREEK	2020
4		Conversion	456	ABASERE	2019
5		Modular	2100	OFURUMA	2019

#	company	Project Type	Capacity (BSPD)	Location	Planned Commission Date
6		Modular	2100	OFURUMA	2019
7		Modular	3090	ABO	2019
8		Conversion	5000	IYUNG	2019
9		Modular	7000	BALA	2020
10		Topping Plant	5000		
11		Topping Plant	5000		
12		Topping plant	5000		
13		Hydro-skimming Plant	24000		
14		Hydro-skimming Plant	10000		
15		Hydro-skimming Plant	21000		
16		Topping Plant	10000		

The National Gas Requirement, which is a critical factor in establishing annual Domestic Gas Supply Obligation (DGSO) volumes for upstream gas producers in the country, has been set at 3.83 BSCF/day for the year 2019. This figure covers the three domestic subsectors. Namely: Gas-to-power (GTP) = 2.06 Bscf/d, Gas Based Industries (GBIs) = 0.86 Bscf/d and Commercial subsector = 0.91 Bscf/d. The figure represents an increase of 448MMscf/d (13%) over the 2018 NGR.

Furthermore, the projected national pipeline capacity for 2019 is 4.6 Bscf/d, with 3.6Bscfd in the Western axis (ELPS I and II trunklines, Oben-Geregu and Oben-Ajaokuta) and 1.0 Bscfd in the Eastern axis.

**Table 52 : Domestic Gas Supply Obligation for E&P Companies, MMSCF/day**

Company / Gas Producers	2019	2020	2021	2022	2023	2024
SHELL PETROLEUM DEVELOPMENT CO.						
CHEVRON NIGERIA LTD.						
MOBIL PRODUCING NIGERIA UNLTD						
NIGERIA AGIP OIL COMPANY						
TOTAL E&P						
ADDAX DEVELOPMENT						
NIGERIAN PET DEV CO. (NPDC)						
AITEO E&P CO						
SEPLAT PRODUCTION AND DEV. CO.						
EROTON E&P CO						
AMNI INTERNATIONAL DEVELOPMENT CO.						
PLATFORM PETROLEUM						
ENERGIA LTD.						
Equinor						
MONI PULO LTD						
NEWCROSS E&P CO						
PANOCEAN OIL CORPORATION NIG						
ATLAS PETROLEUM INTERNATIONAL LTD						
NIGER DELTA PET. RESOURCES LTD						
ORIENTAL ENERGY RESOURCES						
CONTINENTAL OIL AND GAS LTD.						
EXPRESS PET AND GAS CO LTD						
MIDWESTER OIL AND GAS CO. LTD./Suntrust Oil Company Limited						
UNIVERSAL ENERGY						
DUBRI OIL COMPANY						
ALLIED ENERGY RESOURCES NIGERIA LTD						
PILLAR OIL LTD						
NETWORK E&P NIGERIA						
CONSOLIDATED OIL COMPANY LIMITED						
PRIME EXPLORATION						
WALTERSMITH PETROMAN OIL LIMITED						
BRITTANIA-U						
CONCOPHILIPS NIGERIA LIMITED						
GEC PETROLEUM DEVELOPMENT COMPANY LTD (GLOBAL ENERGY)						
STATOIL NIGERIA LIMITED						
WAEP/ Dangote						
SUNLINK PETROLEUM						
YINKA FOLAWIYO PET CO LTD						
PEAK PETROLEUM INDUSTRIES NIGERIA LIMITED						
MILLENNIUM OIL AND GAS LIMITED						
ENAGEED RESOURCES LIMITED						
BAYELSA OIL COMPANY LTD						

Company / Gas Producers	2019	2020	2021	2022	2023	2024
SUMMIT OIL INTERNATIONAL						
Dansaki						
EMERALD ENERGY RESOURCES LIMITED						
GUARANTEE PETROLEUM LIMITED (OPERATOR)						
GREEN ENERGY INTERNATIONAL LIMITED						
SOGENAL LIMITED						
Texaco Outershelf						
SAHARA ENERGY E&P						
EXCEL EXPLORATION & PRODUCTION LIMITED						
BICTA ENERGY & MANAGEMENT SYSTEMS LIMITED						
First E&P/ Dangote						
DEL SIGMA						
MOVIDO E&P LIMITED						
GOLAND PETROLEUM DEV. CO. LIMITED						
CAVENDISH PETROLEUM NIGERIA LIMITED						
CHORUS ENERGY LIMITED						
EURAFRIC ENERGY LIMITED						
INDEPENDENT ENERGY LIMITED						
AFRICOIL & MARKETING CO. LTD.						
ALL GRACE ENERGY LIMITED						
BELEMA						
DAJO OIL LIMITED						
OANDO PLC						
ORIENTAL ENERGY RESOURCES						
STERLING GLOBAL OIL RESORCE LIMITED						
TRANSNATIONAL CORPORATION						
Total Gas	4079.11	3366.00	3764.00	4055.00	4079.00	0
DSO						

The daily average domestic gas supply performance in 2018 was 48.33%. A total gas volume of 1279.32 MMscfd was supplied to the domestic market by eleven companies as shown in the Table below. Also, the National Domestic Gas Capacity Performance for 2018 was 80%. That is, the nation had the capacity to supply 2,063.90 MMscfd but had an actual supply of 1,279.32 MMscfd.

**Table 53 : DGSO Allocation vs Supply Performance**

Company	Supply Oblig (MMscf/d)	Ave Supply (MMscf/d)	% Performance
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**Table 54 : Summary of Domestic Gas Supply Obligation Performance in MMSCF/Day**

Year	Perf	Total
2009	Obligation	0.00
2009	Supply	0.00
2009	% Perf	0.0%
2010	Obligation	0.00
2010	Supply	0.00
2010	% Perf	0.0%
2011	Obligation	0.00
2011	Supply	0.00
2011	% Perf	0.0%
2012	Obligation	0.00
2012	Supply	0.00
2012	% Perf	0.0%
2013	Obligation	0.00
2013	Supply	0.00
2013	% Perf	0.0%
2014	Obligation	0.00
2014	Supply	0.00
2014	% Perf	0.0%
2015	Obligation	0.00
2015	Supply	0.00
2015	% Perf	0.0%
2016	Obligation	0.00
2016	Supply	0.00
2016	% Perf	0.0%



Year	Perf	Total
2017	Obligation	0.00
2017	Supply	0.00
2017	% Perf	0.0%
2018	Obligation	0.00
2018	Supply	0.00
2018	% Perf	0.0%

The Aggregate Gas Pricing Mechanism was adopted for the Domestic Gas Market. The Upstream prices are as indicated below: **Gas to Power:** US\$2.5/MCF

**Gas to Commercial Sector** US\$3.0/MCF e.g Coca cola, textile industries, cement industry **Gas Based Industry (GBI):** US\$0.9/MCF (Floor Price)  
e.g Fertilizer, Petrochemical and Methanol Plants (Plants that use gas as feedstock) **Tariff:** Transportation tariff for National trunk line is US\$0.8/MCF

Note: There is no Federal Government approved transportation tariff for secondary pipeline or distribution connecting pipeline.

Companies such as SEPLAT and Frontier Oil Limited, that have met their DSO have begun to engage in willing buyer, willing seller transactions. This allows parties to determine an agreeable price out of the DSO pricing structure.

#### 4.1.1.1 Execution of Gas Sales & Aggregation Agreement (GSAA).

Chevron Nigeria Limited (CNL) and Dangote Fertiliser Ltd (DFL) executed a GSAA to supply 210MMscf/d of Natural Gas through the Escravos Lagos Pipeline System (ELPS) to the Dangote Group fertiliser project in the Lagos Freezone (LFZ) area. The two-train plant will produce 3 million tonnes of fertiliser, which will be the largest in Africa with installed capacity as follows:

✓ 2 x 2,200 MTPD ammonia plant      ✓ 2 x 4000 MTPD melt urea plant      ✓ 2 x 4000 MTPD urea granulation plants

Pre-commissioning of Train 1 was to end by May 2018 and the train had commenced using an alternative emergency supply arrangement with the intent that gas inflow will begin by July 2018 for commissioning purposes. Commissioning required an initial volume of about 15-20mmscfd, ramping up to a full capacity of 100mmscfd over a period of sixteen (16) weeks.

Nigerian Gas Company (NGC), taking into consideration the potential future customers in the LFZ will be building a 36 inch, 50km gas pipeline from KP292 tie in on the ELPS with a targeted project completion by end of June 2018.

#### 4.1.1.2 Re-categorisation of Textile Industry

In 2018, a presidential approval was granted to re-categorise the textile industry from strategic commercial sector to strategic industrial sector. The approval was made into effect, through a letter from HMSPR, to Gas Aggregation company of Nigeria (GACN) and the Nigerian Gas Marketing Company (NGMC), instructing the immediate implementation of the approved contractual structure for the gas value chain as:

- Volume of Gas – 8.5MMscfd
- Price of Gas - \$1.40/Mscf (Export Parity Price)
- Transmission tariff (major trunk or pipeline) - \$0.80/Mscf
- Distribution tariff (connecting pipelines from city gate to end user) - \$0.20/Mscf
- Administrative cost of NGMC - \$0.10/Mscf

On the 4<sup>th</sup> January 2019, an official gazette resolving the commercial issues between consumers of gas from the textile/manufacturing industries and downstream suppliers and local distribution companies was published. The approved pricing structure are as indicated below:

**Table 55 : Approved Gas Supply Structure for the Textile Industry**

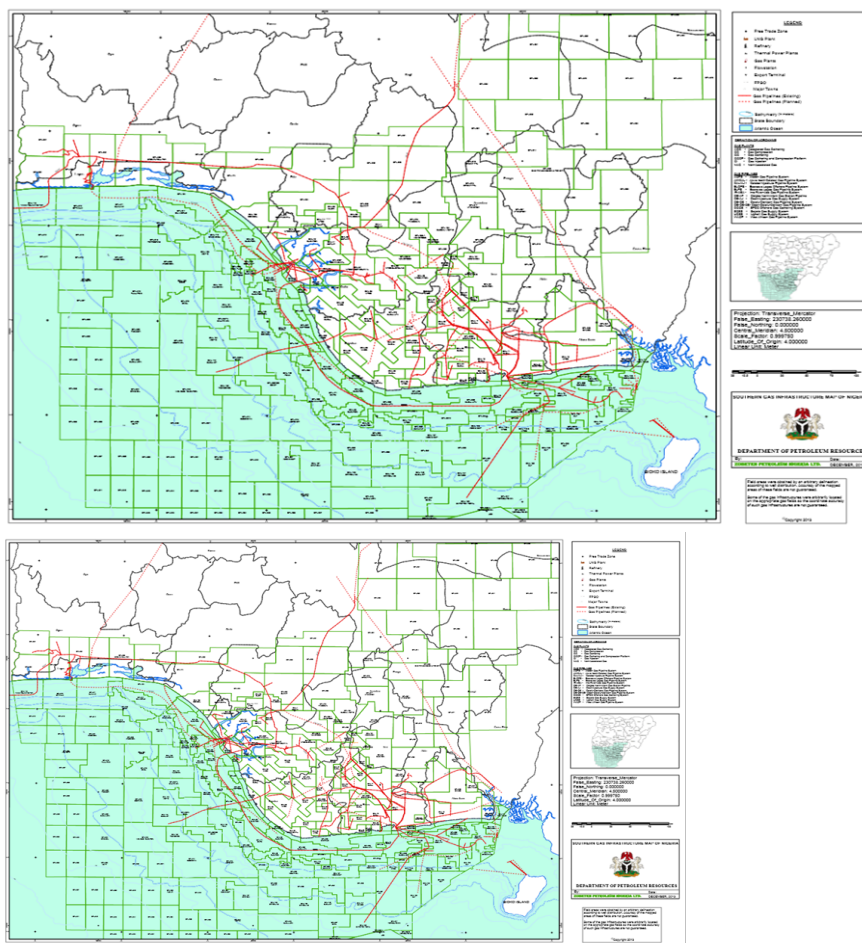
Sector	2018	2019
Upstream EPP (\$/Mcf)	0.00	
Midstream (\$/Mcf)	0.80	
Downstream (\$/Mcf)	1.65	
Total (\$/Mcf)	2.45	0

**Table 56 : Summary of Major Gas Supply Facilities**

Company	Facility	Facility Type	Location	Design Capacity Mmscf/D	Design Life	Date of Commissioning
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**Table 57 : Status of Major Midstream Gas Projects**

Project Title	Company	Project Objective	Capacity Mmscf/d	Location	Expected Completion Date
Test Project	AITEO E&P CO	Project Objective for the year		Calabar	2020-07-04



**Table 58 : Major Petrochemical Plants**

Location	Ownership	Processing Plant Type	Capacity MTPA	Feedstock	product
Kaduna	Federal Govt	Linear Alkyl Benzene	120000	Raw Kerosine	Kero Solvent
Port Harcourt	River State Govt	Carbon Black (CB)	16000	Reformate	Cracked - C5
Bayelsa	Niger Delta Petroleum Resources (NDPR)	Polyethylene (PE)	7000	Ughelli Blend	Heavy 2
Eleme	Indorama	Linear Alkyl Benzene	19000	Decant Oil	Condensate
Warri	Federal Govt	Polypropylene (PP)	12000	Natural Gas Liquid (NGL)	LPG

**Table 59 : Major Petrochemical Plants Projects**

Plant Name	Plant Type	Capacity by Unit	Output By Unit	Status	Start Year	Estimated Completion
Dangote Refinery & Petrochemicals Co	Petrochemical plant lined up near the Refinery	1.3 Million MTPA	1.3 million MTPA	11	2015	2019
Dangote Fertilizer Limited	Urea-based fertilizer plant	6,849.32 MTPD	2.5 million MTPA	12	2015	2018
Quantum Methanol Limited	Methanol Plant	3,000 MTPD	3000 MTPD	10		
Brass Fertilizer Co. Ltd	Methanol and Urea fertilizer plant	2.45 Million MTPA Urea, 1 Million MTPA Methanol	2.45 Million MTPA	11		
Pamaque Nig. Ltd	Hydrocarbon Refrigerant from LPG	20MMscf/d hydrocarbon refrigerant	20MMscf/d	10		
Uraga Methanol Limited, (Honeywell Group Ltd)	Methanol plant	1.2 million MTPA methanol for export	1.2 Million MTPA	10		
BRASS FERTILIZER PLANT	Petrochemicals Methanol and Urea fertilizer plant	2.45 Million TPA Urea and 1.0 million TPA methanol		0		
DANGOTE Urea Fertilizer Plant	Petrochemicals 2.5MTA Urea Fertilizer plant	2.5 million TPA urea		0		
INDORAMA ELEME FERTILIZER CHEMICALS LTD	Petrochemicals Urea Fertilizer Plant	1.4 million MTPA Urea Fertilizer		0		
PAMAQUE NIG. LTD/HYDROFLUOROCARBON	Petrochemicals Hydrocarbon Refrigerant from LPG	20MMscf/d		0		
QUANTUM METHANOL	Petrochemicals Methanol Plant	3000 MTPD methanol		0		
Uraga Methanol Limited	Petrochemicals Methanol plant			0		

**Table 60 : Existing Blending Plants, their Locations and Total Capacities**

Market Category	Company	Location	Storage Capacity Litres
Subtotal			0

Market Category	Company	Location	Storage Capacity Litres
Subtotal			0
Grand Total			0

Table 61 : Licences / Approvals / Permits Granted

#	Facility Type	Licences / Approvals / Permit Issued
NO TABLE STRUCTURE	NO TABLE STRUCTURE	NO TABLE STRUCTURE

Table 62 : Refinery Production Volumes in Litres

Month	Product	Warri, Delta State (WRPC)	Kaduna, Kaduna State (KRPC)	Eleme, River State (PHRC)	Niger Delta Pet Res	Old PHRC, Rivers State	Total, MT	Total, Ltrs
January	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
February	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
March	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
April	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
May	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
June	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
July	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
August	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0

Month	Product	Warri, Delta State (WRPC)	Kaduna, Kaduna State (KRPC)	Eleme, River State (PHRC)	Niger Delta Pet Res	Old PHRC, Rivers State	Total, MT	Total, Ltrs
September	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
October	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
November	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
December	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
Total	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0

**Table 63 : Summary of Refinery Production Volumes in Litres**

Year	Product	Warri, Delta State (WRPC)	Kaduna, Kaduna State (KRPC)	Eleme, River State (PHRC)	Niger Delta Pet Res	Old PHRC, Rivers State	Total, MT	Total, Ltrs
2009	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2010	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2011	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2012	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2013	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0

Year	Product	Warri, Delta State (WRPC)	Kaduna, Kaduna State (KRPC)	Eleme, River State (PHRC)	Niger Delta Pet Res	Old PHRC, Rivers State	Total, MT	Total, Ltrs
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2014	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2015	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2016	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2017	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0
2018	pms	0	0	0	0	0	0	0
	ago	0	0	0	0	0	0	0
	dpk	0	0	0	0	0	0	0
	lpg	0	0	0	0	0	0	0
	lpfo	0	0	0	0	0	0	0

**Table 64 : Petroleum Products Volumes as per Import Permits Issued in Metric Tonnes**

Months								
January	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0
march	0	0	0	0	0	0	0	0
april	0	0	0	0	0	0	0	0
may	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0

**Table 65 : Petroleum Products Volumes as per Import Permits Issued in Metric Tonnes**

Years								
2014	10665337.00	14356908.00	705000.00	2623500.00	1640000.00	183.09	1105500.00	
2015	10104300.00	14981597.00	1312000.00	3884500.00	2340800.00	1602680.00	952300.00	
2016	14052500.00	20116000.00	3708500.00	3733000.00	1853000.00	1616450.00	665250.00	
2017	14538000.00	15158000.00	3452500.00	3755500.00	855000.00	1252310.00	829600.00	
2018	0	0	0	0	0	0	0	

Table 66 : Approved Product Import By Import Permits

Products	MAJORS (MT)			DAPPMA (MT)			TRADERS (MT)			Total (MT)	
	2017	2018	% Diff	2017	2018	% Diff	2017	2018	% Diff	2017	2018
ago	15158000.00	0	-100	0	0	0	1	0	-100	15158001	0
Total	15,158,001.00	1.00	-99	1.00	1.00	2	2.00	1.00	-99	15,158,004.00	3.00

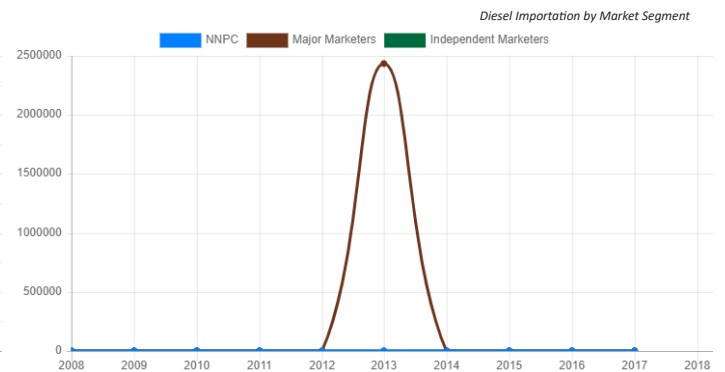
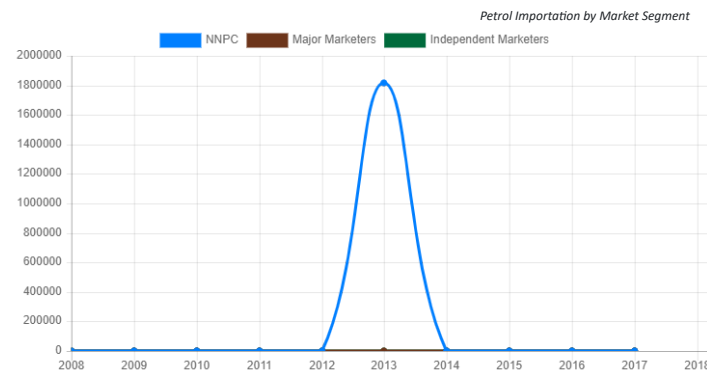
Table 67 : Summary of Petroleum Products Importation by Market Segment Litres

Months	pms	ago	dpk	atk	lpg	lpfo	base oil	bitumen
NNPC, Metric Tonnes								
January	0	0	0	0	0	0	0	0
Febuary	0	0	0	0	0	0	0	0
march	0	0	0	0	0	0	0	0
april	0	0	0	0	0	0	0	0
may	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Major Marketers, Metric Tonnes								
January	0	0	0	0	0	0	0	0
Febuary	0	0	0	0	0	0	0	0
march	0	0	0	0	0	0	0	0
april	0	0	0	0	0	0	0	0
may	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Independent Marketers, Metric Tonnes								
January	0	0	0	0	0	0	0	0
Febuary	0	0	0	0	0	0	0	0
march	0	0	0	0	0	0	0	0
april	0	0	0	0	0	0	0	0
may	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Total, Metric Tonnes								
January	0	0	0	0	0	0	0	0
Febuary	0	0	0	0	0	0	0	0
march	0	0	0	0	0	0	0	0
april	0	0	0	0	0	0	0	0
may	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0

Months	pms	ago	dpk	atk	lpg	lpfo	base oil	bitumen
NNPC, Metric Tonnes								
November	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0
Average Daily Import, Metric Tonnes								
January	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
February	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
march	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
april	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
may	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
June	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
July	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
August	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
September	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
October	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
November	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
December	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 69 : Summary of Petroleum Products Importation by Market Segment Litres**

Market Segment	Product	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total, Metric Tonnes
NNPC	pms	0	0	0	0	0	1815976.17	0	0	0	0	1,815,976.2	2,435,224,044.0
	ago	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	dpk	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	atk	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	lpg	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	lpfo	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	base oil	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Major Marketers	bitumen	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	pms	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	ago	0	0	0	0	0	2431238.00	0	0	0	0	2,431,238.0	2,829,961,032.0
	dpk	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	atk	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	lpg	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	lpfo	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Independent	base oil	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	bitumen	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	pms	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	ago	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	dpk	0	0	0	0	0	155920.00	0	0	0	0	155,920.0	181,490,880.0
	atk	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	lpg	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	lpfo	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	base oil	0	0	0	0	0	0	0	0	0	0	0.0	0.0
	bitumen	0	0	0	0	0	0	0	0	0	0	0.0	0.0



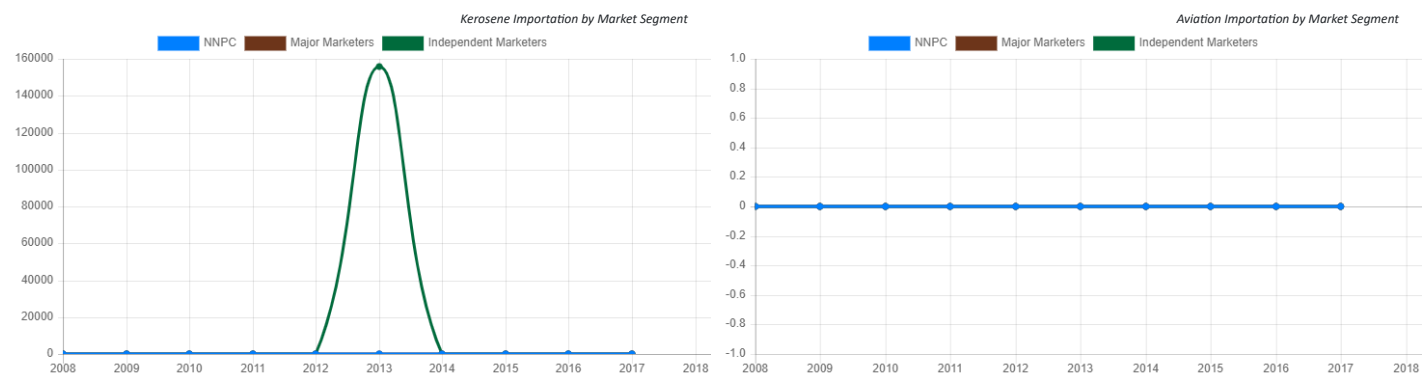


Figure  
Product Importation by Market Segment

**Table 70 : Petroleum Products Import Summary, Litres**

Year	pms	ago	dpk	atk	lpg	lpfo	base oil	bitumen
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2012	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2013	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2014	1,815,976.17	2,431,238.00	155,920.00	0.00	0.00	0.00	0.00	0.00
2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2016	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2018	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

**Table 71 : Product Import: Number of Product Vessels**

Field Office	PMS Import Vessels	DPK Import Vessels	AGO Import Vessels	ATK Import Vessels
Calabar	101	11	25	0
Eket	6	0	0	0
Lagos	449	24	212	63
Port-Harcourt	83	2	39	2
Umuahia		0	370	0
Warri	246	7		
<b>Total</b>	<b>885</b>	<b>44</b>	<b>646</b>	<b>65</b>

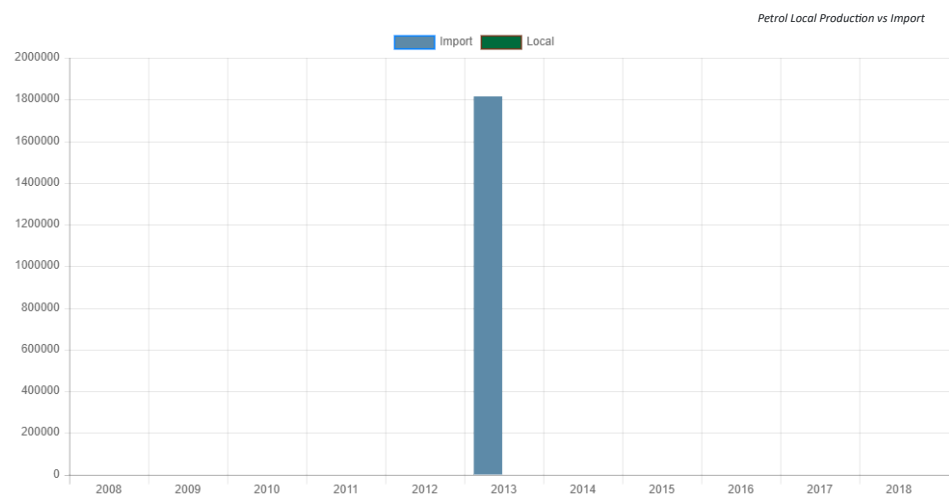
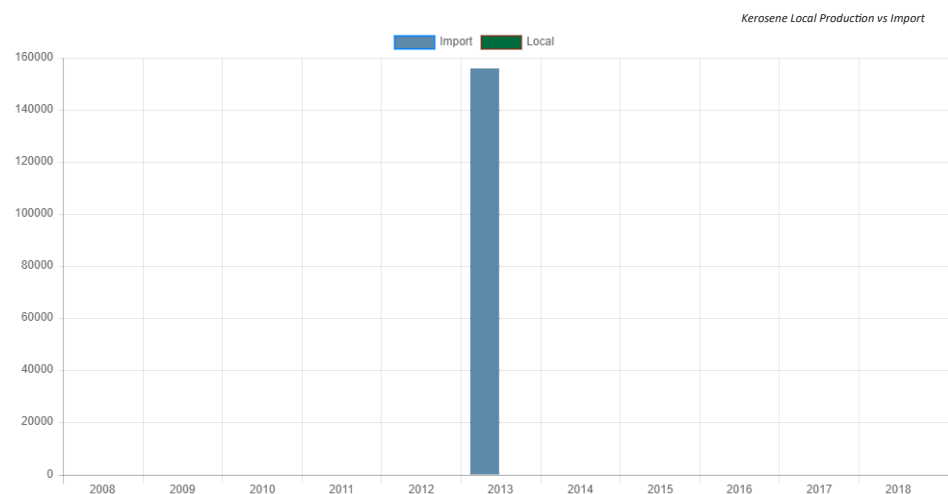
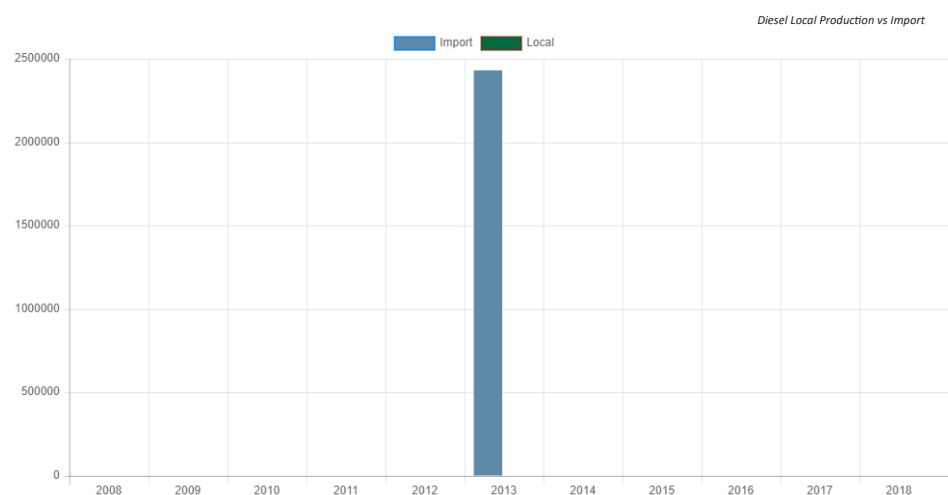


Figure  
Product Local Production vs Import





**Table 72 : Retail outlets Summary - Filling Stations count**

State	Independent	Major	NNPC - Franchise & Mega	Grand Total
Abia	0	0	0	0
Adamawa	0	0	0	0
Akwa-Ibom	0	0	0	0
Anambra	0	0	0	0
Bauchi	0	0	0	0
Bayelsa	0	0	0	0
Benue	0	0	0	0
Borno	0	0	0	0
Cross River	0	0	0	0
Delta	0	0	0	0
Ebonyi	0	0	0	0
Edo	0	0	0	0
Ekiti	0	0	0	0
Enugu	0	0	0	0
FCT	0	0	0	0
Gombe	0	0	0	0
Imo	0	0	0	0
Jigawa	0	0	0	0
Kaduna	0	0	0	0
Kano	0	0	0	0



Independent				MAJOR			NNPC - Franchise & Mega		
State	PMS	DPK	AGO	PMS	DPK	AGO	PMS	DPK	AGO
Cross River	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0
Ebonyi	0	0	0	0	0	0	0	0	0
Edo	0	0	0	0	0	0	0	0	0
Ekiti	0	0	0	0	0	0	0	0	0
Enugu	0	0	0	0	0	0	0	0	0
FCT	0	0	0	0	0	0	0	0	0
Gombe	0	0	0	0	0	0	0	0	0
Imo	0	0	0	0	0	0	0	0	0
Jigawa	0	0	0	0	0	0	0	0	0
Kaduna	0	0	0	0	0	0	0	0	0
Kano	0	0	0	0	0	0	0	0	0
Katsina	0	0	0	0	0	0	0	0	0
Kebbi	0	0	0	0	0	0	0	0	0
Kogi	0	0	0	0	0	0	0	0	0
Kwara	0	0	0	0	0	0	0	0	0
Lagos	0	0	0	0	0	0	0	0	0
Nasarawa	0	0	0	0	0	0	0	0	0
Niger	0	0	0	0	0	0	0	0	0
Ogun	0	0	0	0	0	0	0	0	0
Ondo	0	0	0	0	0	0	0	0	0
Osun	0	0	0	0	0	0	0	0	0
Oyo	0	0	0	0	0	0	0	0	0
Plateau	0	0	0	0	0	0	0	0	0
Rivers	0	0	0	0	0	0	0	0	0
Sokoto	0	0	0	0	0	0	0	0	0
Taraba	0	0	0	0	0	0	0	0	0
Yobe	0	0	0	0	0	0	0	0	0
Zamfara	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0

**Table 75 : Petroleum Products Average Consumer Price Range - Naira per Litre**

Year	Market Segment	PMS	ago	DPK
2018	Independent Marketers	123 - 145	187 - 199	201 - 222
2018	Major Marketers	100 - 110	100 - 110	100 - 110
2018	NNPC - Franchise	200 - 210	200 - 210	200 - 210
2017	NNPC - Mega	210 - 230	210 - 230	210 - 230
2017	Major Marketers	123 - 127	145 - 156	200 - 210
2017	Independent Marketers	123 - 127	145 - 156	200 - 210

The domestic LPG sector witnessed a significant growth in 2018. There was a 15.92% rise in LPG consumption from the year end of 2017 to 2018.

**Table 76 : LPG importation by Zone**

Months	Lagos (MT)	Warri (MT)	Calabar (MT)
January	0.000	0.000	0.000
February	0.000	0.000	0.000
march	0.000	0.000	0.000
april	0.000	0.000	0.000
may	0.000	0.000	0.000
June	0.000	0.000	0.000
July	0.000	0.000	0.000
August	0.000	0.000	0.000
September	0.000	0.000	0.000
October	0.000	0.000	0.000
November	0.000	0.000	0.000
December	0.000	0.000	0.000
TOTAL	0.00	0.00	0.00

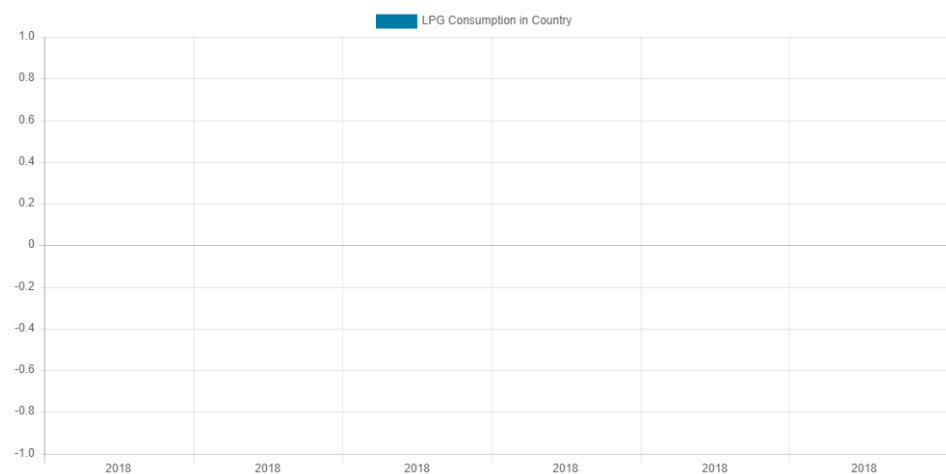


Figure  
LPG Consumption in 2018

**Table 77 : Accident Report – Industry-wide**

Month	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
January	8	6	2	3	5	3	0	5
February	6	4	2	4	2	2	2	4
March	4	0	4	4	0	0	4	4
April	2	2	0	0	2	0	0	0
May	3	0	3	0	3	0	0	0
June	1	1	0	1	0	1	0	2
July	21	13	8	10	11	2	8	14
August	14	8	6	8	6	4	4	15
September	7	5	2	3	4	1	2	11
October	13	4	9	3	10	0	3	37
November	5	4	1	3	2	3	0	4
December	5	3	2	0	5	0	0	0
Total	89	50	39	39	50	16	23	96

**Table 78 : Accident Report – Upstream**

Month	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
January	6	5	1	2	4	2	0	4
February	4	3	1	3	1	2	1	3
March	2	0	2	2	0	0	2	2
April	1	1	0	0	1	0	0	0
May	2	0	2	0	2	0	0	0
June	1	1	0	1	0	1	0	2
July	12	8	4	5	7	1	4	7
August	8	5	3	5	3	3	2	9
September	4	3	1	2	2	1	1	10
October	7	2	5	2	5	0	2	36
November	5	4	1	3	2	3	0	4
December	3	2	1	0	3	0	0	0
Total	55	34	21	25	30	13	12	77

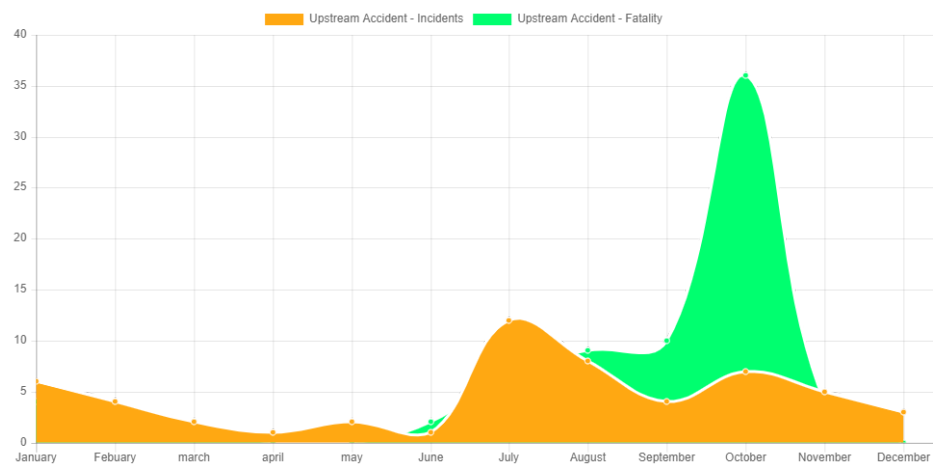


Figure  
Accident Report - Upstream

**Table 79 : Accident Report – Downstream**

Month	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
January	2	1	1	1	1	1	0	1
February	2	1	1	1	1	0	1	1
March	2	0	2	2	0	0	2	2
April	1	1	0	0	1	0	0	0
May	1	0	1	0	1	0	0	0
June	0	0	0	0	0	0	0	0
July	9	5	4	5	4	1	4	7
August	6	3	3	3	3	1	2	6
September	3	2	1	1	2	0	1	1
October	6	2	4	1	5	0	1	1
November	0	0	0	0	0	0	0	0
December	2	1	1	0	2	0	0	0
Total	34	16	18	14	20	3	11	19



Figure  
Accident Report - Downstream

**Table 80 : Accident Report – Upstream**

Year	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0

Year	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
2010	44	18	26	19	25	3	19	22
2011	44	21	23	17	27	5	12	17
2012	53	27	26	30	23	11	26	37
2013	45	17	28	15	30	14	13	27
2014	32	9	23	12	20	0	13	13
2015	41	18	23	17	24	3	14	18
2016	33	9	24	15	18	2	13	24
2017	39	17	22	19	20	3	16	21
2018	55	34	21	25	30	13	12	77

**Table 81 : Accident Report – Downstream**

Year	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	18	10	8	6	12	17	15	32
2011	19	15	4	7	12	14	4	18
2012	14	13	1	4	10	123	0	123
2013	16	14	2	3	13	2	5	7
2014	7	6	1	2	5	1	7	8
2015	9	6	3	4	5	3	1	7
2016	17	15	2	6	11	6	0	14
2017	21	20	1	12	9	12	0	49
2018	34	16	18	14	20	3	11	19

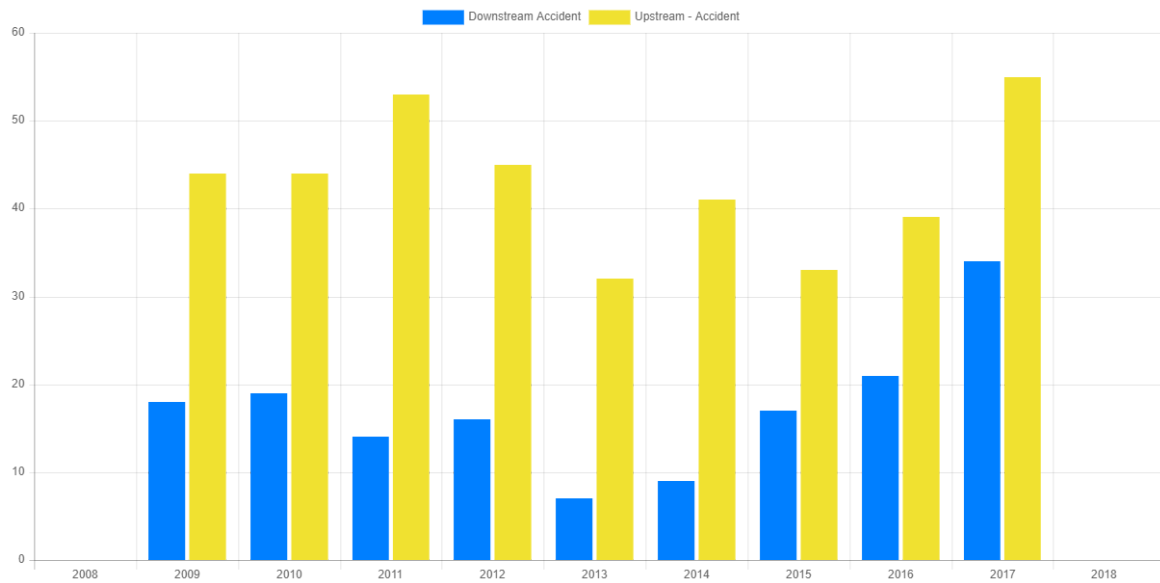


Figure  
Downstream versus Upstream Incidents

**Table 82 : Accident Report – Industry-wide**

Year	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	62	28	34	25	37	20	34	54
2011	63	36	27	24	39	19	16	35
2012	67	40	27	34	33	134	26	160
2013	61	31	30	18	43	16	18	34

Year	Incidents	Work Related	Non Work Related	Fatal Incident	Non Fatal Incident	Work Related Fatal Incident	Non Work Related Fatal Incident	Fatality
2014	39	15	24	14	25	1	20	21
2015	50	24	26	21	29	6	15	25
2016	50	24	26	21	29	8	13	38
2017	60	37	23	31	29	15	16	70
2018	89	50	39	39	50	16	23	96

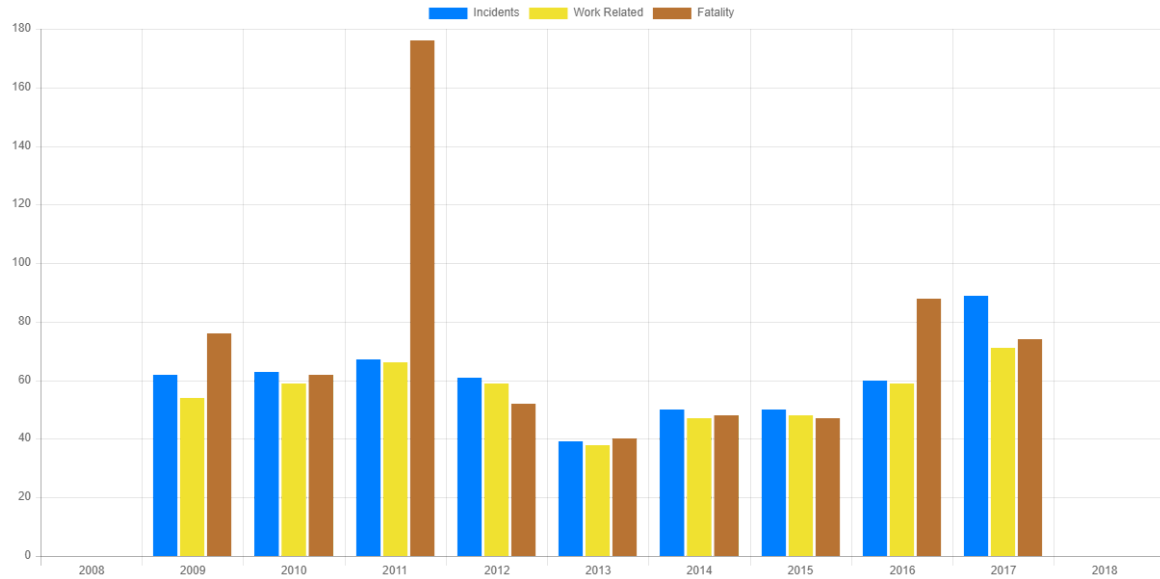


Figure  
Accident Report – Industry-wide

**Table 83 : Spill Incidence Report**

Month	Natural Accident	Corrosion	Equipment Failure	Sabotage	Human Error	YTBD	Mystery	Total Spill	Volume Spill
January	0	4	6	20	0	5	2	40	91.9843
February	0	2	7	20	0	6	2	40	177.9600
March	0	1	7	23	1	13	1	48	229.3399
April	0	5	3	8	0	8	0	25	768.3629
May	0	1	5	14	1	7	2	33	699.5554
June	0	3	6	26	0	4	3	47	712.8865
July	0	3	1	29	0	3	5	43	2036.1519
August	0	1	2	17	0	4	4	29	300.5728
September	0	1	2	20	0	2	6	33	1511.3683
October	0	0	3	12	0	2	5	23	234.3156
November	0	1	1	33	0	4	9	48	2249.3540
Total	0	22	43	222	2	58	39	409	9011.8516

<sup>1</sup> Spills caused by natural disasters/events such as flooding, extreme weather conditions etc.<sup>2</sup> Spills caused by corrosion of pipelines, vessels, tanks and other crude oil handling installations.

<sup>3</sup> Spills caused by preventable failure of oil and gas installations/equipment<sup>4</sup> Spills caused by third party intervention. This also includes cases of vandalism and crude oil theft that may not have resulted to hydrocarbon release to the environment.

<sup>5</sup> Spills caused by operational errors involving a human interface.

<sup>6</sup> This means "Yet-to-be-determined". The cause(s) of the spill(s) were not reported in the submitted oil spill reporting forms. Usually indicative that the Form B was not submitted, or the Joint Investigation Visit (JIV) was either not carried out or was inconclusive. Often, the quantity spilled for this category of spills may also not have been reported.

<sup>7</sup> Spills identified or reported by operators who assert that the spill did not originate from their facilities. The origin of the spill is thus said to be inconclusive. Usually the operator is expected to take reasonable steps to respond to the spill in addition to the reporting of same.

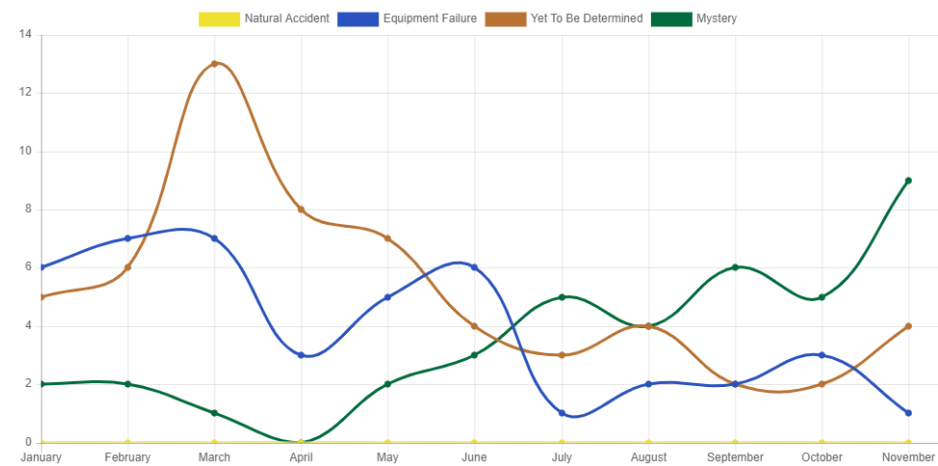


Figure  
Spill Incidents

Table 84 : Spill Incidence Summary

Year	Number of Spills	Quantity Spilled (Brl)
2008	0	0
2009	0	0
2010	307	17658.1000
2011	672	66906.8400
2012	840	17526.3700
2013	525	4066.2000
2014	1087	10302.1600
2015	753	32737.2681
2016	425	1618.9825
2017	1581	14774.3107
2018	409	9011.8516

Table 85 : Report on Produced Water Volumes Generated

Company	Facility	Terrain	Concession	Volume/Day (Bbl)
ADDAX EXPLORATION		OML250	Deep Offshore	821
ORIENTAL ENERGY RESOURCES		OML253	Continental Shelf	36657
CHEVRON NIGERIA LTD.		OML256	Continental Shelf	27,878
CHEVRON NIGERIA LTD.		OML259	Continental Shelf	3
CHEVRON NIGERIA LTD.		OML262	Deep Offshore	1308
CHEVRON NIGERIA LTD.		OML265	Deep Offshore	50,000
CHEVRON NIGERIA LTD.		OML268	Deep Offshore	200
TOTAL E&P	Afiesere Gas Lift Compressor Station	OML271	Deep Offshore	110517
PANOCEAN OIL CORPORATION NIG		OML274	Deep Offshore	87320
MONI PULO LTD		OML277	Deep Offshore	70686
SHELL PETROLEUM DEVELOPMENT CO.		OML280	Continental Shelf	14966
SHELL PETROLEUM DEVELOPMENT CO.		OML283	Continental Shelf	110000
SHELL PETROLEUM DEVELOPMENT CO.		OML286	Continental Shelf	150410
SHELL PETROLEUM DEVELOPMENT CO.		OML289	Continental Shelf	22000
SHELL PETROLEUM DEVELOPMENT CO.		OML292	Land	3292
NIGERIAN AGIP OIL COMPANY		OML295	Land	15000

Table 86 : Drilling Waste Volumes

Month	Sum Of WBMC (Mt)	Sum Of OBMC (Mt)	Sum Of Spent WBM (Mt)	Sum Of Spent OBM (Mt)
January	4357.50	4993.30	6866.70	7385.00
February	7268.00	8503.00	7237.00	4220.70



Month	Sum Of WBMC (Mt)	Sum Of OBMC (Mt)	Sum Of Spent WBM (Mt)	Sum Of Spent OBM (Mt)
March	14773.72	9246.55	6569.80	6226.56
April	1989.10	4339.20	380.50	550.70
May	3288.40	2801.76	4248.80	1397.09
June	5906.10	4076.80	2835.90	1586.62
July	7700.12	2984.26	6307.58	5177.40
August	4825.31	2793.65	2224.00	1438.00
September	70.00	502.00	240.00	674.00
October	4740.80	1640.20	1175.68	1110.42
November	3358.04	3579.88	2335.63	3668.71
December	1644.40	1116.59	1003.45	1398.87
Grand Total	59921.49	46577.19	41425.04	34834.07

**Table 87 : Accredited Waste Managers**

Company	Type of Facility	Location Area	Operational Status
Specialty Drilling Fluids Ltd	TDU : 1 unit		
Specialty Drilling Fluids Ltd	WBM : 1 unit		
Specialty Drilling Fluids Ltd	Hazardous Waste Transportation : Waste Transportation		
Nubian Nigeria Ltd	TDU : LTDU (Rotomil Low Temperature)		
Nubian Nigeria Ltd	WBM Handling : WBM Handling - Onsite		
Delta Waste Management Company Limited (DEL)	TDU : 3 HTDUs, 2 LTDUs		
Delta Waste Management Company Limited (DEL)	INCINERATOR : High Temp Hazardous Waste Incinerator		
Delta Waste Management Company Limited (DEL)	WBM Handling : Using HT Incinerator		
Delta Waste Management Company Limited (DEL)	Hazardous Waste Transportation : Waste Transportation		
Delta Waste Management Company Limited (DEL)	Tank/Vessel Cleaning unit : TCU-050701 & SC 15 TWGL		
ITS Drilling Services Nigeria Limited	INCINERATOR : 2 Trash Incinerators CA1000 & RD700 (Models)		
ITS Drilling Services Nigeria Limited	Secondary Waste Management : Secondary Waste Management		
ITS Drilling Services Nigeria Limited	Hazardous Waste Transportation : Hazardous Waste Transportation		
Paschal Technical Services Ltd	INCINERATOR : 1 Macroburn V500C Incinerator		
Paschal Technical Services Ltd	Tank Cleaning : Gamajet-8		
Paschal Technical Services Ltd	Hazardous Waste Transportation : Hazardous Waste Transportation - Onshore		
Golden Years Ltd	INCINERATOR : 2x 1000kg/hr Incinerators		
Golden Years Ltd	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Golden Years Ltd	Secondary Waste Management : Secondary Waste Management		
Allman Global	INCINERATOR : 1 x 1000KG/HR Incinerator		
Allman Global	WBM : Mobile Water based Treatment Plant		
Allman Global	Hazardous Waste Transportation : Hopper Barges		
The Initiates	TDU : 1 Indirect Fire Soil Remediation, WBM and Associated cuttings treatment Unit		
The Initiates	Secondary Waste Management : Secondary Waste Management		
The Initiates	Tank Cleaning : Super Macs		
The Initiates	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
The Initiates	INCINERATOR : 1 AANL Kg/hr Rotary Kiln Incinerator		
The Initiates	Secondary Waste Management : Secondary Waste Management		
The Initiates	WBM Handling : WBM Handling		
Nautilus Engineering and Construction Company (NECC)	TDU : 1 TDU		
Seric Impianti	TDU : 1 Unit Bethlehem Thermal D System		
Boskel Engineering Services	INCINERATOR : High Temp. Rotary Kiln incinerator, 1 High Temp. Liquid incinerator.		
Boskel Engineering Services	TDU : 1 unit		
Halden Nigeria Limited	INCINERATOR : 1-unit Dual Chamber PL-1200 Incinerator		
Halden Nigeria Limited	WBM Handling : WBM Handling: Offsite		
Halden Nigeria Limited	TDU : 1x Vulcan IDR		
Frigate Investment Ltd	TDU : 2 units LTDU		
Frigate Investment Ltd	WBM Handling : WBM Handling: Offsite		
Frigate Investment Ltd	Hazardous Waste Transportation : 4 Coral Barges		
Frigate Investment Ltd	Waste Water Treatment : 50kl/hr SSS0000		
Frigate Investment Ltd	Secondary Waste Management : Secondary Waste Management		
Frigate Investment Ltd	Tank Cleaning : Gamajet Technology		
FIBOW	INCINERATOR : 1-unit High Temp Horizontal Flow Multi-Chambered Incinerator		
EPCC Ltd	INCINERATOR : 1-unit Sludge Incinerator		
Titan Projects Nigeria Limited	TDU : 2 units		
Titan Projects Nigeria Limited	WBM Handling : WBM Handling		
Titan Projects Nigeria Limited	Secondary Waste/Solidification : Secondary Waste/Solidification		
Titan Projects Nigeria Limited	Hazardous Waste Transportation : 3 Coral Barges		
Comprehensive Remediation Technologies (CRT)	TDU : 1x GTS LTDU unit		
Comprehensive Remediation Technologies (CRT)	INCINERATOR : 1-unit G-30 Therm-Tec Incinerator		

Company	Type of Facility	Location Area	Operational Status
Comprehensive Remediation Technologies (CRT)	Tank/Vessel Cleaning : Tank/Vessel Cleaning		
Comprehensive Remediation Technologies (CRT)	Hazardous Waste Transportation : Hazardous Waste Transportation		
Mosab Marine and Engineering Services Limited	TDU : 1unit Vulcan TDU		
Mosab Marine and Engineering Services Limited	WBM Handling : WBM Handling: Onsite		
Mosab Marine and Engineering Services Limited	Tank/Vessel Cleaning : Tank/Vessel Cleaning		
Amotol Global Services Limited	INCINERATOR : 1 unit – Model 450S		
Amotol Global Services Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Amotol Global Services Limited	WBM Handling : WBM Handling		
Franco Intl Energy Services	TDU : 1 unit		
Prime Sources Ltd	INCINERATOR : 1 unit		
Petro-Scan Ltd	TDU : 1 unit		
Fidella Oil and Gas Services Ltd	TDU : 1-unit Vulcan Model 14818 TDU		
Fidella Oil and Gas Services Ltd	WBM Waste Water Treatment : WBM Waste Water Treatment		
Fidella Oil and Gas Services Ltd	INCINERATOR : 1 unit (AANL-1000KG/HR DTS)		
Fidella Oil and Gas Services Ltd	Tank/Vessel Cleaning : Gobyjet		
Olutee Engineering Services	INCINERATOR : 1 Gencorp Beverly Type Waste Incinerator (for general waste)		
Olutee Engineering Services	INCINERATOR : 1 Howden Pyrolytic Gasification System (medical incinerator)		
Olutee Engineering Services	INCINERATOR : 1 Municipal Waste (Trash) incinerator		
Mawe Services Limited	TDU : 1 unit		
Titan Projects Nigeria Limited	TDU : 2 units		
Titan Projects Nigeria Limited	Hazardous Waste Transportation : Coral Barges		
Ebenco Global Resources Limited	INCINERATOR : 1 unit		
Vmart Company Limited	LTDU : 1 unit		
Vmart Company Limited	INCINERATOR : Incinerator		
Vmart Company Limited	Sewage Treatment Plant : Sewage Treatment Plant		
Silver Star Environmental Nigeria Limited	TDU : : 4 units		
Silver Star Environmental Nigeria Limited	WBM Handling : WBM Handling		
Silver Star Environmental Nigeria Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
ITS Drilling Services Nigeria Limited	TDU : TDU: 1 unit		
ITS Drilling Services Nigeria Limited	Secondary Waste Management : Secondary Waste Management		
ITS Drilling Services Nigeria Limited	WBM Handling : WBM Handling		
ITS Drilling Services Nigeria Limited	INCINERATOR : CA-1000 Domestic Trash Incinerator		
ICREN Services Limited	INCINERATOR : 1 unit		
JAPPCO Nigeria Limited	WBM Handling : On-site treatment unit		
Stelmas Integrated Services Limited	Waste Recycling : Waste Recycling		
Blueworks Technologies	WBM Handling : On-site treatment unit		
Ejovi Dredging & Marine Services Limited	WBM Handling : WBM Handling		
Salasar Enterprises Limited	Pyrolysis plant : Pyrolysis plant		
Technoserve Africa Limited	WBM Handling : WBM Handling		
Dubi Nigeria Company Limited	WBM Handling : WBM Handling		
Montego Upstream Services Limited	TDU : TDU		
Montego Upstream Services Limited	WBM Handling : WBM Handling		
Montego Upstream Services Limited	Hazardous Waste Transportation : Hazardous Waste Transportation - Onshore		
Dakotelin Nigeria Limited	WBM Handling : WBM Handling: On-site		
Dakotelin Nigeria Limited	Bulk Cuttings Evacuation/Transfer : Bulk Cuttings Evacuation/Transfer		
Currenters Nigeria Limited	Waste Recycling Plant : Waste Recycling Plant		
Currenters Nigeria Limited	Hazardous Waste Transportation : Hazardous Waste Transportation – Onshore		
Currenters Nigeria Limited	Tank/Vessel Cleaning : Tank/Vessel Cleaning Unit		
JB Synergy Limited	Hazardous Waste Transportation : 1 Coral Barge		
Consolidated Integrated Field Services Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Prompt Technology Services Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Elvimex Nigeria Limited	Waste Recycling : Waste Recycling		
Elvimex Nigeria Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Emtobi Multi Services Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Phronesis Oil and Gas Tek Limited	WBM Handling : WBM Handling: Onsite		
Wilton Services Nig. Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Offshore		
Wilton Services Nig. Limited	WBM Handling : WBM Handling - Onsite		
Oilfield Management Services Limited	TDU : 1 Unit (Model WJ 9)		
Oilfield Management Services Limited	WBM Handling : WBM Handling - Onsite		
TMCH Group Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
TMCH Group Limited	Tank/Vessel Cleaning unit : Gamajet VIII		
TYJ Trinity oilfield Services	Zero Discharge Drilling Waste Streams Fixation : Zero Discharge Drilling Waste Streams Fixation		
Newbirth Environmental Project Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Elywin Wealth Nigeria Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Integrated Waste Solutions Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
Greenbelt Tropical Environs Limited	TDU : 1-unit LTDU		
Greenbelt Tropical Environs Limited	Hazardous Waste Transportation : Coral Barges		
Greenbelt Tropical Environs Limited	Secondary Waste Management : Secondary Waste Management		
Roadlamp Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		

Company	Type of Facility	Location Area	Operational Status
Philcom Integrated Limited	Hazardous Waste Transportation : Hazardous Waste Transportation: Onshore		
FILCO Drilling & Completion Services Limited	Offshore Drill Cuttings Evacuation : Offshore Drill Cuttings Evacuation		
Coson Oil and Gas Projects Limited	WBM Handling : WBM Handling: On-site		
Anam Resources Limited	Waste Recycling : Waste Recycling		
B2 Oil & Gas Project Limited	Hazardous Waste Transportation : Hazardous Waste Transportation - Onshore		
CKS Environmental Services Nigeria Limited	WBM Handling : WBM Handling: Onsite		
Milat Nigeria Limited	Tank Cleaning : Milat-Sepor Equipment		
OMG Rubicon Synergy Limited	Wood Waste Recycling : Frost ST6 Woodchipper		
Synergy Environmental Experts Global Limited	Tank Cleaning : Gamajet (Alfa Laval GJ-Series)		
Patoski International Services Limited	Tank Cleaning : Gamajet		
Lafarge Africa Plc	Secondary Waste Management : Secondary Waste Management		
Mabisel Trading & Construction Company Limited	Tank/Vessel Cleaning unit : Gobyjet		
Monarch Environmental Services Limited	Tank/Vessel Cleaning : Tank/Vessel Cleaning		
Mascodi Global Integrated Services Limited	Waste Recycling : Waste Recycling (Parrafin wax)		
Tima Global Resources Limited	Hazardous Waste Transportation : Hazardous Waste Transportation - Onshore		
ISEEU Multi-Concept Limited	Tank/Vessel Cleaning unit : Scanjet SC-45-TW		
NCS Tank Cleaning Limited	Tank/Vessel Cleaning : Tank/Vessel Cleaning		
Remix Industrial Support Limited	Hazardous Waste Transportation : Hazardous Waste Transportation - Onshore		
Global Process and Pipeline Limited	Tank/Vessel Cleaning : Stoneage Torus 130		
Environ Consult & Remedial Services Limited	Tank/Vessel Cleaning unit : NES 320 Mover/ Gamajet		
KTV Group Nigeria	Tank/Vessel Cleaning unit : Blabo Tech		
Judora Integrated Services Nigeria Limited	Hazardous Waste Transportation : Hazardous Waste Transportation - Onshore		
CE-Stalong Resources Limited	Tank/Vessel Cleaning unit : Alfa Laval GJ-8		
Zitadel Limited	Tank/Vessel Cleaning unit : Tank/Vessel Cleaning unit		
M-I Nigeria Limited	Tank/Vessel Cleaning unit : Tank/Vessel Cleaning unit		
International Environmental Consultant	TDU : 1 unit		
KGDN Technologies Limited	Tank/Vessel Cleaning unit : Tank/Vessel Cleaning unit		
Iwo-se International Services Limited	Tank/Vessel Cleaning unit : Tank/Vessel Cleaning unit		
Honeybrooks Industrial & Environmental Services Limited	Tank/Vessel Cleaning unit : BR Mixer		
African Circle Pollution Management Limited	Tank Cleaning : Gamajet		
African Circle Pollution Management Limited	Liquid Waste Separator : Liquid Waste Separator		
African Circle Pollution Management Limited	INCINERATOR : 1 unit Tectrol Incinerator		
EnvironSafe Logistics Limited	Hazardous Waste Management : Hazardous Waste Management - Onshore		
Seegnal Nigeria Limited	Tank/Vessel Cleaning unit : Gamajet		
Asbury International Limited	Tank/Vessel Cleaning unit : Alfa Laval GJ-10 & GJ-8)		
Eka-Ata Onne Nigeria Limited	INCINERATOR : AANL-1000kg/hr		
Resdepn International Limited	Tank/Vessel Cleaning unit : Hurricane QC250 Vacuum Unit		

**Table 88 : Summary Of Waste Management Facilities**

#	Type of Facility	Operational Permit
1	INCINERATOR	23
2	TDU	23
3	WBM	2
4	Hazardous Waste Transportation	32
5	Tank/Vessel Cleaning unit	15
6	Secondary Waste Management	8
7	Tank Cleaning	7
8	Waste Water Treatment	1
9	Secondary Waste/Solidification	1
10	Tank/Vessel Cleaning	7
11	LTDU	1
12	Sewage Treatment Plant	1
13	Waste Recycling	4
14	Pyrolysis plant	1
15	Bulk Cuttings Evacuation/Transfer	1
16	Zero Discharge Drilling Waste Streams Fixation	1
17	Offshore Drill Cuttings Evacuation	1
18	Wood Waste Recycling	1
19	Liquid Waste Separator	1
20	Hazardous Waste Management	1
21	WBM Handling	22
22	Waste Recycling Plant	1
23	WBM Waste Water Treatment	1
24	SLOP/Produced water	0

Table 89 : Oil Spill Contingency Plan Activation Exercises

#	Location	Terrain	Nos Of Companies For Oscp/Fi	Actual Nos Of Companies Audited
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Table 90 : Number Of Petitions Received In

Category	CSR	Pollution	Compensation	Others (Disputes, Contractual Issues, Recognition As Host Community)
Count	0	0	0	0

Table 91 : Request For Approvals – Chemicals

No. of Applications Received	Approved	Disapproved	Pending
259	130	0	0

Table 92 : Summary of Accredited Laboratories

Laboratory Service	Lagos Zone	Port Harcourt Zone	Warri Zone	Total
Total	0	0	0	0

Table 93 : Summary of Drilling Chemicals

#	Drilling Fluid Type	Numbers
1	Chemical 10	1
2	Chemical 100	1
3	Chemical 103	1
4	Chemical 106	1
5	Chemical 109	1
6	Chemical 112	1
7	Chemical 115	1
8	Chemical 118	1
9	Chemical 121	1
10	Chemical 124	1
11	Chemical 127	1
12	Chemical 13	1
13	Chemical 130	1
14	Chemical 133	1
15	Chemical 136	1
16	Chemical 139	1
17	Chemical 142	1
18	Chemical 145	1
19	Chemical 148	1
20	Chemical 151	1
21	Chemical 154	1
22	Chemical 157	1
23	Chemical 16	1
24	Chemical 160	1
25	Chemical 163	1
26	Chemical 166	1
27	Chemical 169	1
28	Chemical 172	1
29	Chemical 175	1
30	Chemical 178	1
31	Chemical 181	1
32	Chemical 184	1
33	Chemical 187	1
34	Chemical 19	1
35	Chemical 190	1
36	Chemical 193	1

#	Drilling Fluid Type	Numbers
37	Chemical 196	1
38	Chemical 199	1
39	Chemical 202	1
40	Chemical 205	1
41	Chemical 208	1
42	Chemical 211	1
43	Chemical 214	1
44	Chemical 217	1
45	Chemical 22	1
46	Chemical 220	1
47	Chemical 223	1
48	Chemical 226	1
49	Chemical 229	1
50	Chemical 232	1
51	Chemical 235	1
52	Chemical 238	1
53	Chemical 241	1
54	Chemical 244	1
55	Chemical 247	1
56	Chemical 25	1
57	Chemical 250	1
58	Chemical 253	1
59	Chemical 256	1
60	Chemical 259	1
61	Chemical 262	1
62	Chemical 265	1
63	Chemical 268	1
64	Chemical 28	1
65	Chemical 31	1
66	Chemical 34	1
67	Chemical 37	1
68	Chemical 40	1
69	Chemical 43	1
70	Chemical 46	1
71	Chemical 49	1
72	Chemical 52	1
73	Chemical 55	1
74	Chemical 58	1
75	Chemical 61	1
76	Chemical 64	1
77	Chemical 67	1
78	Chemical 70	1
79	Chemical 73	1
80	Chemical 76	1
81	Chemical 79	1
82	Chemical 82	1
83	Chemical 85	1
84	Chemical 88	1
85	Chemical 91	1
86	Chemical 94	1
87	Chemical 97	1

**Table 94 : Approved Production Chemicals Inventory**

#	Production Chemicals	Numbers
1	Chemical 101	1
2	Chemical 104	1
3	Chemical 107	1
4	Chemical 11	1
5	Chemical 110	1
6	Chemical 113	1
7	Chemical 116	1
8	Chemical 119	1
9	Chemical 122	1
10	Chemical 125	1
11	Chemical 128	1

#	Production Chemicals	Numbers
12	Chemical 131	1
13	Chemical 134	1
14	Chemical 137	1
15	Chemical 14	1
16	Chemical 140	1
17	Chemical 143	1
18	Chemical 146	1
19	Chemical 149	1
20	Chemical 152	1
21	Chemical 155	1
22	Chemical 158	1
23	Chemical 161	1
24	Chemical 164	1
25	Chemical 167	1
26	Chemical 17	1
27	Chemical 170	1
28	Chemical 173	1
29	Chemical 176	1
30	Chemical 179	1
31	Chemical 182	1
32	Chemical 185	1
33	Chemical 188	1
34	Chemical 191	1
35	Chemical 194	1
36	Chemical 197	1
37	Chemical 20	1
38	Chemical 200	1
39	Chemical 203	1
40	Chemical 206	1
41	Chemical 209	1
42	Chemical 212	1
43	Chemical 215	1
44	Chemical 218	1
45	Chemical 221	1
46	Chemical 224	1
47	Chemical 227	1
48	Chemical 23	1
49	Chemical 230	1
50	Chemical 233	1
51	Chemical 236	1
52	Chemical 239	1
53	Chemical 242	1
54	Chemical 245	1
55	Chemical 248	1
56	Chemical 251	1
57	Chemical 254	1
58	Chemical 257	1
59	Chemical 26	1
60	Chemical 260	1
61	Chemical 263	1
62	Chemical 266	1
63	Chemical 29	1
64	Chemical 32	1
65	Chemical 35	1
66	Chemical 38	1
67	Chemical 41	1
68	Chemical 44	1
69	Chemical 47	1
70	Chemical 50	1
71	Chemical 53	1
72	Chemical 56	1
73	Chemical 59	1
74	Chemical 62	1
75	Chemical 65	1
76	Chemical 68	1
77	Chemical 71	1
78	Chemical 74	1
79	Chemical 77	1
80	Chemical 80	1

#	Production Chemicals	Numbers
81	Chemical 83	1
82	Chemical 86	1
83	Chemical 89	1
84	Chemical 92	1
85	Chemical 95	1
86	Chemical 98	1
Total		86

Table 95 : Applications For Environmental Restoration Services

#	Service	Approval Status	Approval (New)	Approval (Renewal)	Total
Total			0	0	0

Table 96 : Environmental Studies

Month	BIOLOGICAL MONITORING STUDY	ENVIRONMENTAL BASELINE STUDY	ENVIRONMENTAL EVALUATION STUDY	ENVIRONMENTAL IMPACT ASSESSMENT	ENVIRONMENTAL SCREENING REPORT	POST- DRILL SEABED SURVEY	PRE -DRILL SEABED SURVEY	POST IMPACT ASSESSMENT STUDY	SCOPE OF WORK/TERMS OF REFERENCE	PRELIMINARY IMPACT ASSESSMENT	Total
January	0	0	0	0	0	0	0	0	0	0	0
February	0	0	0	0	0	0	0	0	0	0	0
March	0	0	0	0	0	0	0	0	0	0	0
April	0	0	0	0	0	0	0	0	0	0	0
May	0	0	0	0	0	0	0	0	0	0	0
June	0	0	0	0	0	0	0	0	0	0	0
July	0	0	0	0	0	0	0	0	0	0	0
August	0	0	0	0	0	0	0	0	0	0	0
September	0	0	0	0	0	0	0	0	0	0	0
October	0	0	0	0	0	0	0	0	0	0	0
November	0	0	0	0	0	0	0	0	0	0	0
December	0	0	0	0	0	0	0	0	0	0	0
Total											

Table 97 : Offshore Safety Permit OSP Summary

Year	PERSONNEL REGISTERED	PERSONNEL CAPTURED	PERMITS ISSUED
2018	9884	8915	9072

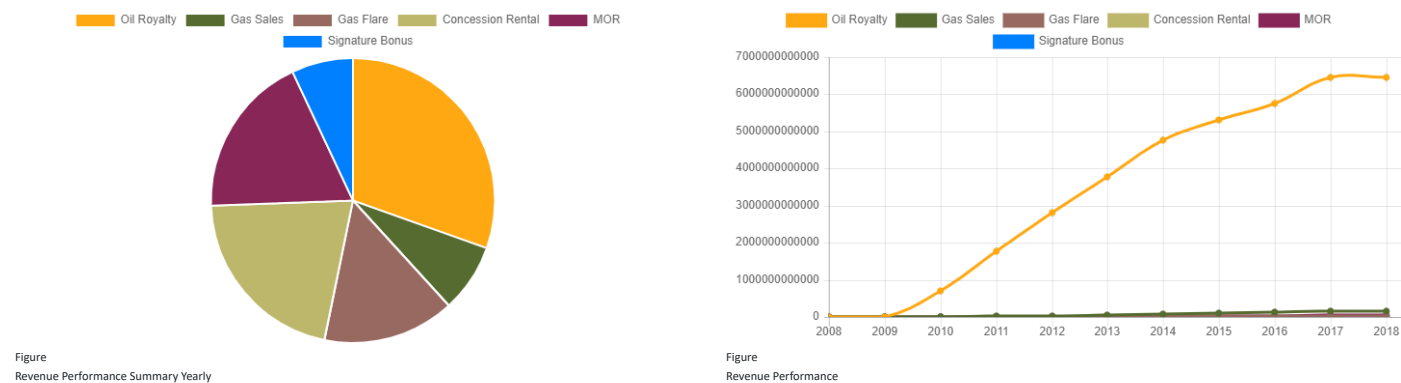
Table 98 : Approved Safety And Medical Emergency Training Centres

#	Company	Facility Location Address	Approved Courses
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Table 99 : Revenue Performance Summary

Year	Oil Royalty ₦	Gas Royalty ₦	Gas Flare Penalty ₦	Concession Rentals ₦	MOR ₦	Signatre Bonus ₦	Total Revenue ₦
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	694,352,412,710.14	0.00	2,388,572,351.20	728,308,923.82	951,380,744.23	0.00	698,420,674,729.39
2011	1,066,836,980,909.87	14,613,812,392.68	3,482,627,975.15	388,502,293.27	2,077,222,926.87	0.00	1,087,399,146,497.84
2012	1,052,043,067,383.93	22,242,285,752.85	3,849,873,091.61	444,535,531.69	1,370,171,171.68	0.00	1,079,949,932,931.76
2013	960,540,365,106.84	23,235,123,088.28	3,120,786,665.13	178,630,934.47	3,981,983,109.64	0.00	991,056,888,904.36
2014	986,343,364,217.80	21,110,923,948.24	2,930,215,304.51	413,496,723.26	5,983,027,290.84	0.00	1,016,781,027,484.65
2015	545,061,446,369.23	22,292,228,906.41	2,590,365,296.82	201,275,922.56	17,489,298,348.58	0.00	587,634,614,843.60
2016	437,356,879,889.83	16,298,590,492.52	2,333,879,050.11	342,495,121.25	6,408,509,381.58	0.00	462,740,353,935.29
2017	704,431,333,766.93	33,173,790,789.60	2,779,377,359.95	356,894,436.55	6,357,674,731.33	0.00	747,099,071,084.36

Year	Oil Royalty ₦	Gas Royalty ₦	Gas Flare Penalty ₦	Concession Rentals ₦	MOR ₦	Signature Bonus ₦	Total Revenue ₦
2018	9,234,123,340.00	2,356,524,350.00	4,563,431,190.00	6,432,323,122.00	5,632,222,210.00	2,123,456,660.00	30,342,080,872.00
Total	6,456,199,973,694.57	155,323,279,720.58	28,039,128,284.48	9,486,463,008.87	50,251,489,914.75	2,123,456,660.00	6,701,423,791,283.25



5.0 GLOSSARY ITEMS

- AG - Associated Gas
- AGO - Automated Gas Oil
- ARz - African Regional Line
- ATC-Approval to Construct
- BPSD – Barrel per Stream Day
- CB - Carbon Black
- DGSO - Domestic Gas Supply Obligation
- DPK - Dual Purpose Kerosene
- DPR - Department of Petroleum Resources
- EGP – Escravos Gas Plant
- EOR - Enhanced Oil Recovery
- FCT - Federal Capital Territory
- FPSO - Floating Production Storage and Offloading
- IDSL –Integrated Data Services Limited
- IO – Indigenous Operator
- IOC - International Oil Company
- JV - Joint Venture
- KM - Kilometer
- KRPC - Kaduna Refinery & Petrochemical Company
- LAB - Linear Alkyl Benzene
- LLDPE - Linear Low Density Polyethylene
- MF - Marginal Field
- MMbbls - Million barrels
- MMSCFD - Million Standard Cubic Feet per Day
- MT – Metric Tonnes
- NAG – Non-Associated Gas
- NAOC - Nigerian Agip Oil Company
- NAPIMS - National Petroleum Investment Management Services
- NDPR - Niger Delta Petroleum Resources
- NDRC - Niger Delta Regional Data Compilation
- NGC – Nigerian Gas Company
- NGL - Natural Gas Liquid
- NNPC - Nigerian National Petroleum Corporation
- NPDC - Nigerian Petroleum Development Company
- OBLG - Obligation
- OML - Oil Mining Lease
- OPEC – Organization of the Petroleum Exporting Countries
- OPL - Oil Prospecting License
- PE - Polyethylene
- PERF - performance
- PHRC - Port Harcourt Refining Company
- PMS - Petroleum Motor Spirit
- PP - Polypropylene



PPT - Petroleum Profit Tax  
PRF - Propylene-Rich Feed  
PSC - Production Sharing Contract  
SC - Service Contract  
SPDC - Shell Petroleum Development Company  
SQ KM - Square Kilometer  
SR - Sole Risk  
TA - Technology Adaptation  
TCF - Trillion Cubic Feet  
TQ - Technology Qualification  
WRPC - Warri Refining & Petrochemical Company

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The data and information published in this report are subject to ongoing review by DPR based on continuous reconciliation with various stakeholders. Therefore, reliance on data contained herein should be based on final confirmation by DPR.

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