THE FEDERAL GOVERNMENT OF NIGERIA

Nigerian Gas Flare Commercialisation Programme

Programme Information Memorandum

November, 2018

www.ngfcp.gov.ng

IMPORTANT NOTICE

This Programme Information Memorandum is issued by the Federal Government of Nigeria (FGN) through the Department of Petroleum Resources as part of the Nigerian Gas Flare Commercialisation Programme (NGFCP) for information and use by parties who have registered with the NGFCP to assist them in submitting Statements of Qualification (SOQ) to participate in the NGFCP. The information contained in this Programme Information Documents will be updated for the Request for Proposals (RFP).

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Abbreviations

CNG	Compressed natural gas
FGN	Federal Government of Nigeria
GDP	Gross domestic product
GSA	Gas Sales Agreement
GTL	Gas to Liquids
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
mmscf/d	Million standard cubic feet per day
mscf	Thousand standard cubic feet
NGFCP	Nigeria Gas Flare Commercialisation Programme
NGL	Natural Gas Liquids
OML	Oil Mining Lease
RFQ	Request for qualification
RFP	Request for proposals
SOQ	Statement of qualification

1.1 Nigerian Gas Flare Commercialisation Programme (NGFCP)

2 Context

2.1 Country Overview

Nigeria is located in West Africa and shares borders with Niger in the north, Chad in the northwest, Cameroon in the east and Republic of Benin in the west (Figure 1). To the south the country faces the Atlantic Ocean. Nigeria is Africa's most populous country with a population of 198 million[1] and a gross domestic product (GDP) of Naira 115 trillion[2] (US$ 377 billion) in 2017. The country is organised as a Federal Republic and is divided into 36 states and a Federal Capital Territory, Abuja, which serves as the national capital and seat of government. Lagos, Nigeria's largest city, is the country's economic and commercial centre. Other major cities include Kano, Abuja and Port Harcourt. The Nigerian economy grew at an average annual rate of 5 percent between 2008 and 2017. As with many other major oil exporters, Nigeria's economic growth slowed in 2015, owing in large part to the decline in crude oil prices. After falling into recession in 2016, Nigeria's GDP posted positive growth in 2017 and has been maintaining recovery in 2018.

Figure 1: Map of Nigeria

[1] http://population.gov.ng/
[2] http://www.nigerianstat.gov.ng/elibrary

2.2 Recent Developments on Gas Flaring Reduction

The FGN has made international commitments with respect to reducing gas flaring, issued two policies for oil and gas[3], and launched the Nigeria Gas Flare Commercialisation Programme (NGFCP).

2.2.1 International Commitments

The FGN in June 2016 endorsed the World Bank's **Zero Routine Flaring Reduction by 2030** initiative (http://www.worldbank.org/en/programs/zero-routine-flaring-by-2030). The initiative pertains to routine flaring of gas, which is flaring during normal oil production operations in the absence of sufficient facilities or amenable geology to re-inject the produced gas, utilise it on-site, or dispatch it to a market[4]. By endorsing the initiative, the FGN has committed to providing a legal, regulatory, investment and operating environment that is conducive to upstream investments and to the development of viable markets for utilisation of gas and the infrastructure necessary to deliver gas to these markets, and making every effort to ensure that routine flaring at existing oil fields ends as soon as possible, and no later than 2030.

In May 2017, the FGN ratified the **2015 Paris Climate Change Agreement** and submitted its first nationally determined contributions to the United Nations Framework Convention on Climate Change.[5] The nationally determined contributions included strengthening enforcement of gas flaring restrictions and working to end gas flaring by 2030 as a mitigation measure to combat global warming.

2.2.2 Policies

The FGN published the **National Gas Policy** and the **National Petroleum Policy** in the official gazette in December 2017. The National Gas Policy commits to ending gas flaring, creating an enabling environment for investors, seeking value addition for gas, and improving governance in the sector. The FGN will work to grant open access to all pipelines and other essential midstream infrastructure. With respect to pricing of gas for the domestic market, which is largely controlled by the FGN under a transitional pricing framework, the current framework will be retained for a limited period until a sufficient gas market is established. The policy objective is to move to market-led wholesale gas pricing without gas price regulation, except where there are natural monopolies.

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[3] Namely, the National Petroleum Policy and the National Gas Policy (www.7Bigwins.com)..
[4] Venting is not an acceptable substitute for flaring.
[5] http://www4.unfccc.int/ndcregistry/pages/Party.aspx?party=NGA.

Earlier in 2015, the Ministry of Petroleum Resources announced "**7 Big Wins**" (http://petroleumresources.gov.ng/7-big-wins/), which outline short and medium-term priorities to grow Nigeria's oil and gas industry from 2015 to 2019. The third pillar is a gas revolution, which includes reduction of gas flaring as one of the six goals.

In support of the goal of ending routine gas flaring, the Federal Executive Council (the cabinet) in 2016 approved the **Nigeria Gas Flare Commercialisation Programme** (NGFCP) as the mechanism for implementing Nigeria's commitment to eliminate routine gas flaring. The **Petroleum Act** of 1969 and **Flare Gas (Prevention of Waste and Pollution) Regulations 2018**, signed in July 2018, provide the basis for the NGFCP. Based on the right of the FGN under the Petroleum Act to take gas at the flare free of cost, the NGFCP was launched by the Ministry of Petroleum Resources in December 2016. The NGFCP is designed to offer a series of auction rounds, wherein the FGN takes the flare gas at the flare and auctions it to third parties for commercialisation. This Programme Information Memorandum focuses primarily on issues related to associated gas that is not being used by its producers and is the subject of the auctions in the NGFCP.

2.3 Oil and Gas Regulatory and Fiscal Framework

2.3.1 Oil Mining Laws, Decrees and Regulations Relevant to Gas Flaring

The relevant legislation on gas flaring includes the Petroleum Act 1969, Associated Gas Re-Injection Act 1979, and Flare Gas (Prevention of Waste and Pollution) Regulations 2018. The Nigerian National Petroleum Corporation Act governs the Nigerian National Petroleum Corporation, which is wholly owned by the FGN.

The **Flare Gas (Prevention of Waste and Pollution) Regulations 2018**, signed by President Buhari in July 2018, are based on the following main principles:

- The purpose is to reduce the negative environmental and social impact caused by the flaring of associated natural gas, protect the environment, prevent waste of natural resources, and create social and economic benefits from flare gas utilisation.
- Producers are charged a flare payment for each thousand standard cubic feet (mscf) of associated gas that is flared, irrespective of whether flaring is routine or non-routine. The level of the flare payment—US$2.00 or US$0.50 per mscf depending on the scale of oil production—is designed to provide Guaranteed Flare Gas to Projects granted a Permit to Access Flare Gas under an NGFCP auction process, provide incentives to crude oil producers to develop their own flare-gas commercialisation projects, or do both.
- The FGN, and not the Producer, owns the Flare Gas.
- By written instrument, the Minister of Petroleum Resources authorises Permit Holders—those who have been granted Permits to Access Flare Gas after a competitive bid process

in the NGFCP conducted by the FGN—to take Flare Gas at specified sites on behalf of the FGN.

- A Permit to Access Flare Gas can be given only to companies other than Producers of the gas being flared. Producers can, however, participate in the NGFCP through a subsidiary midstream company or in association with third parties. Producers also have an opportunity to develop their own commercialisation projects for gas currently being flared, provided that five conditions set forth in the Flare Gas (Prevention of Waste and Pollution) Regulations 2018 are met, including having executed all material commercial agreements and obtained all required licenses and permits, and demonstration of commercial viability by 1 January 2020.

The following guidelines will support the Flare Gas (Prevention of Waste and Pollution) Regulations 2018:

1. Guideline for Grant of Permit to Access Flare Gas
2. Guideline for Flare Gas Measurement, Data Management and Reporting Obligations
3. Guideline for Flare Payments
4. Guideline for Producer's Approved Flare-Out Projects

The Guidelines will be available at www.ngfcp.gov.ng before the commencement of the RFP process.

Earlier, the FGN issued the Associated Gas Re-Injection Act 1979 which is supported by the Associated Gas Re-Injection (Continued Flaring of Gas) Regulations 1985. They allow a company to continue to flare gas without any payment or any other penalty if the Minister of Petroleum Resources is satisfied that utilisation or re-injection of the produced gas is not appropriate or feasible, and the Minister issues a certificate to that effect, subject to certain conditions.

The Nigerian Extractive Industries Transparency Initiative Act 2007 provides the framework for transparency and accountability by imposing reporting and disclosure obligations on all oil and gas companies.[6]

2.3.2 Fiscal Terms Affecting Flare Gas Commercialisation

For gas utilisation, Section 39 of the Companies Income Tax Act[7] provides a tax relief of up to five years and afterwards an annual allowance of 90 percent with 10 percent retention for investments in plant and machinery. During the tax-free period, all dividends are tax-free where

[6] http://www.neiti.gov.ng/index.php/media-center/our-blog/item/254-f-g-n-renews-faith-in-eiti-implementation. See particularly section 3.

[7] http://www.firs.gov.ng/Tax-Management/Pages/Tax-Legislations.aspx.

the investment is in foreign currency or imported plants and machinery consist at least 30 percent of the company's share capital. Interest payable on a loan obtained for a gas development project is tax deductible, provided the consent of the Minister of Finance is secured. For this purpose, gas utilisation is defined as "*the marketing and distribution of natural gas for commercial purpose and includes power plant, liquefied natural gas, gas to liquid plant, fertiliser plant, gas transmission and distribution pipelines*".

The Nigerian Oil and Gas Industry Content Development Act 2010 provides a framework for participation of Nigerians in the industry across the supply chain, lays down minimum thresholds of Nigerian content expected in the goods and services utilised in the oil and gas industry, requires that all contracts valued at more than US$ 1 million be subject to approval by the Nigerian Content Development and Monitoring Board, and provides for 1 percent of all contract values to be paid to the Nigerian Content Development and Monitoring Board.[8]

Section 14 (2) (b) of the Niger Delta Development Commission (Establishment Etc) Act 2000 provides for 3 percent contribution "*of the total annual budget of any oil producing company operating onshore and offshore in the Niger-Delta area; including gas processing companies*" to be paid into the NDDC Fund.

The Education Tax Act provides for the imposition of annual taxes at 2 percent of assessable profits on companies registered in Nigeria for the development of Nigeria's educational sector.

2.4 Lease and Licence Awards

As of 2016, the FGN had awarded 109 Oil Mining Leases (OML) to oil and gas-producing companies, of which 76 were producing oil and gas while the rest were either undergoing field development or had been shut in by the lease operator. In 16 OMLs, 28 companies operated 30 Marginal Fields, almost all of which are onshore. As of 2016, only 13 of these Marginal Fields had come on stream and were producing. The FGN had also awarded 76 Oil Prospecting Licences.[9]

[8] https://www.ncdmb.gov.ng/images/GUIDELINES/NCACT.pdf. See particularly sections 11, 17 and 104.

[9] https://dpr.gov.ng/wp-content/uploads/2018/04/2016-Oil-Gas-Industry-Annual-Report.pdf. The number of Oil Prospecting Licences awarded is shown as 74 in table 2 and 76 in table 3.

2.5 Oil and Gas Industry Players and Market Status

2.5.1 Upstream

In 2016, there were 44 upstream operators engaged in oil and gas production activities. Crude oil and condensate production fell below 2 million barrels per day, a drop of nearly 10 percent from 2015. Certified production figures from 2017 are not yet available, but monthly production figures published by the Nigerian National Petroleum Corporation indicate that production might have bounced back by only 4 percent.[10]

There are several contract types in Nigeria for hydrocarbon exploration and production namely:

- Joint Venture Agreements between private companies (largely major international oil companies) and the Nigerian National Petroleum Corporation;
- Production Sharing Contracts signed between the Nigerian National Petroleum Corporation and other companies, many of which are for deep water blocks;
- Sole risk contracts including Marginal Fields, which fall under a tax-and-royalty regime; and
- Service contracts, of which there was only one in 2016.

Details about each OML, its production status, contract type, and asset ownership shares can be found in the 2016 annual report published by the Department of Petroleum Resources, available at https://dpr.gov.ng/wp-content/uploads/2018/04/2016-Oil-Gas-Industry-Annual-Report.pdf.

2.5.2 Midstream

The Nigeria Gas Pipeline and Transport Company Limited (NGPTC) owns and operates nearly all gas pipelines in the country. The company was unbundled from the Nigeria Gas Company in 2016 to separate its pipeline transportation business from its gas marketing business to avoid conflicts of interest. Two companies were formed, the NGPTC and the Nigerian Gas Marketing Company Limited (NGMC). Both are subsidiaries of the Nigerian National Petroleum Corporation.

The Nigeria Liquefied Natural Gas (NLNG) Limited was established by the Nigeria LNG (Fiscal Incentives, Guarantees and Assurances) Act and incorporated in 1989. Nigeria LNG exports Liquefied Natural Gas (LNG) and natural gas liquids (NGL). The Nigerian National Petroleum Corporation owns 49 percent of Nigeria LNG. Nigeria LNG has the capacity to produce 22 million tonnes of LNG and 5 million tonnes of NGL annually from 3,500 million standard cubic feet

[10] http://nnpcgroup.com/NNPCBusiness/BusinessInformation/PerformanceData/MonthlyPerformanceData/tabid/617/FolderID/211/Default.aspx

(mmscf/d) of natural gas. Nigeria LNG is considering adding a seventh train, which would expand the LNG production capacity to 30 million tonnes per year. Nigeria LNG has contributed significantly to the reduction of gas flaring in Nigeria. It also supplies about two-fifths of the domestic demand for liquefied petroleum gas (LPG). [11] In 2017, Nigeria LNG converted approximately 3,000 mmscf/d of gas to LNG and NGL.[12]

Nigeria has a gas-to-liquids (GTL) plant in Escravos, which began production in 2014. Chevron owns 75 percent of the venture and the Nigerian National Petroleum Corporation owns the remaining 25 percent. The plant converted about 170 mmscf/d in 2017 to GTL products.[12]

The West African gas pipeline connects Nigeria to Benin, Togo and Ghana. Headquartered in Ghana, the West Africa Gas Pipeline Company (http://www.wagpco.com) is a joint venture between public and private companies from the four countries. The Nigerian National Petroleum Corporation is a shareholder. The pipeline capacity was designed initially for 170 mmscf/d, to be expanded over time to 460 mmscf/d. However, in 2017, the amount of gas flowing from Nigeria averaged only 37 mmscf/d.[12]

A major transformation of the Nigerian gas sector is hinged on the Nigeria Gas Transportation Network Code, which is under development and will provide for non-discriminatory third-party access to pipelines. The introduction of the network code will provide windows of opportunity to various industry players, investors and potential gas off-takers to engage in different aspects of the gas value chain.

The midstream oil sector suffers from refining capacity that falls far short of its nameplate capacity, which is about 450,000 barrels per day. All refineries are currently owned by the Nigerian National Petroleum Corporation. Due to years of neglect, capacity utilisation averaged only 18 percent in 2018. The Nigerian National Petroleum Corporation imports significant quantities of refined products through a form of crude-product exchange called direct sale/direct purchase. The Dangote Oil Refining Company is in the process of building an integrated refinery and petrochemical complex, about 650,000 barrels per day in capacity, near Lagos. Once the complex starts operating, Nigeria is expected to turn from being a net importer of petroleum products to a net exporter.

For automotive natural gas, a concern is the price subsidy offered to gasoline, which is a substitute for compressed natural gas (CNG). The FGN announced elimination of fuel price

[11] http://nlng.com/Our-Company/Pages/Profile.aspx.

[12] http://nnpcgroup.com/NNPCBusiness/BusinessInformation/PerformanceData/MonthlyPerformanceData/tabid/617/FolderID/211/Default.aspx

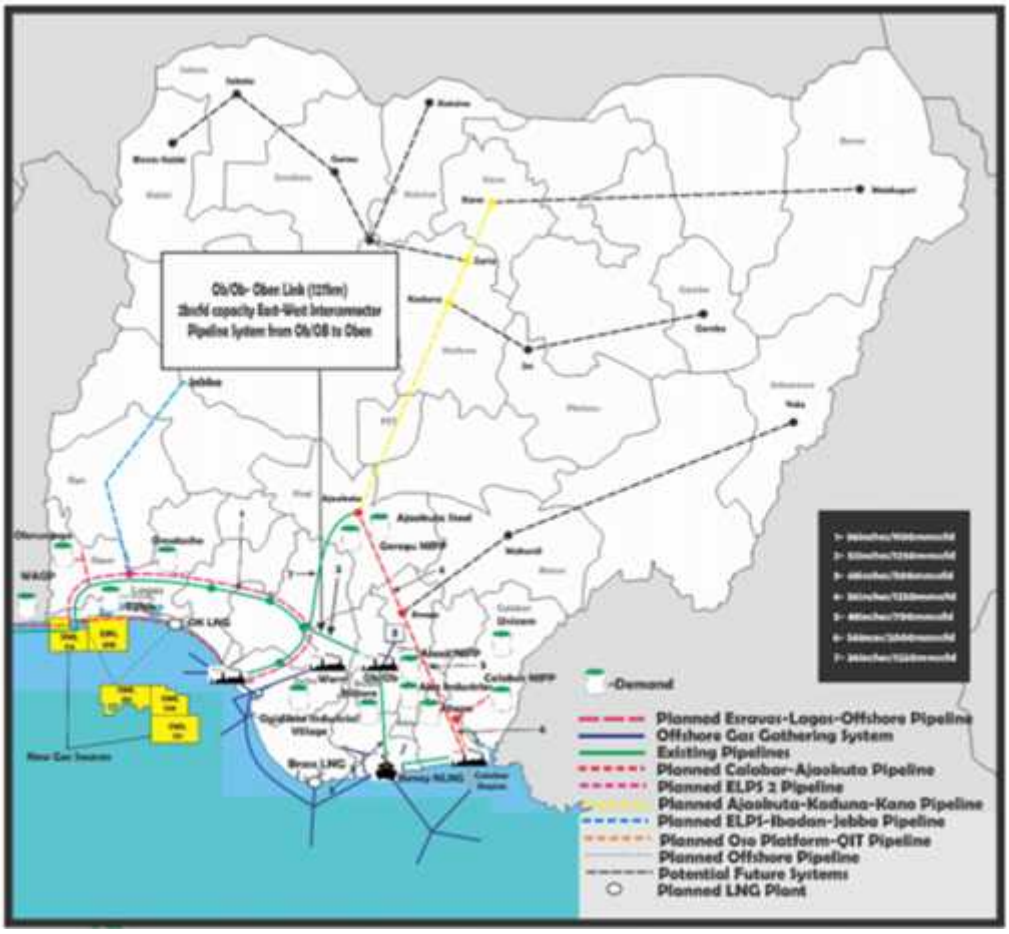
subsidies and adoption of “price modulation” in 2016 when the world oil price fell to the lowest level in years in real terms.

2.6 Related Infrastructure

2.6.1 Gas Infrastructure

The Department of Petroleum Resources in its 2016 annual report lists 92 gas facilities ranging from compressor stations to those for fractionation, injection, metering, and export facilities. The report also lists 36 projects for gas processing plants.[13] Figure 2 shows the location of the gas pipelines in Nigeria.

Figure 2 Nigerian Gas Pipeline System



[13] https://dpr.gov.ng/wp-content/uploads/2018/04/2016-Oil-Gas-Industry-Annual-Report.pdf.

2.6.2 Power sector

The total gross installed power generation capacity in Nigeria is 13,000 megawatts (MW). Active generation capacity consists of 8,700 MW of gas generation and 1,700 MW of hydropower. Reliably available net generation capacity, however, is about 5,500 MW.[14] Generation plants are frequently stranded for lack of gas but at the same time they are also forced to reject gas because distribution companies do not take generated electricity or owing to transmission constraints.

There are significant payment arrears throughout the supply chain, including to gas suppliers. Currently, this is the single most important reason why efforts at supplying gas to the power sector have stalled.

The severe shortages of grid electricity have led to widespread use of backup generation using gasoline and diesel fuel. The scale of off-grid generation has not been quantified with accuracy, but Nigeria is one of the largest markets for diesel generation sets in the world. Extensive use of captive power generation using liquid fuels provides opportunities for off-grid gas-fuelled generation units. Small captive generation units use gasoline, which is subsidised today, but larger units use diesel which is not subsidised and sold for an average of ₦208 (US$0.68) per litre during the first five months of 2018.[15] However, once Nigeria becomes a net importer of diesel fuel with the start of operation of the Dangote Oil Refining Company, fuel pricing should switch from import parity to export parity, reducing (unsubsidised) prices of gasoline and diesel.

Analysis of daily transmission by the Transmission Company of Nigeria shows that in 2015 the largest amount of electricity transmitted corresponded to about 4,200 MW.[14] Figure 3 shows the transmission lines in Nigeria.

[14] http://www.nercng.org/index.php/component/remository/Draft-Documents/TCN-(ISO)-Generation-Adequacy-Report/?Itemid=591

[15] The National Bureau of Statistics conducts monthly price surveys in every state and Abuja. The results are available at http://nigerianstat.gov.ng/elibrary.

Figure 3 Nigerian Power Transmission System

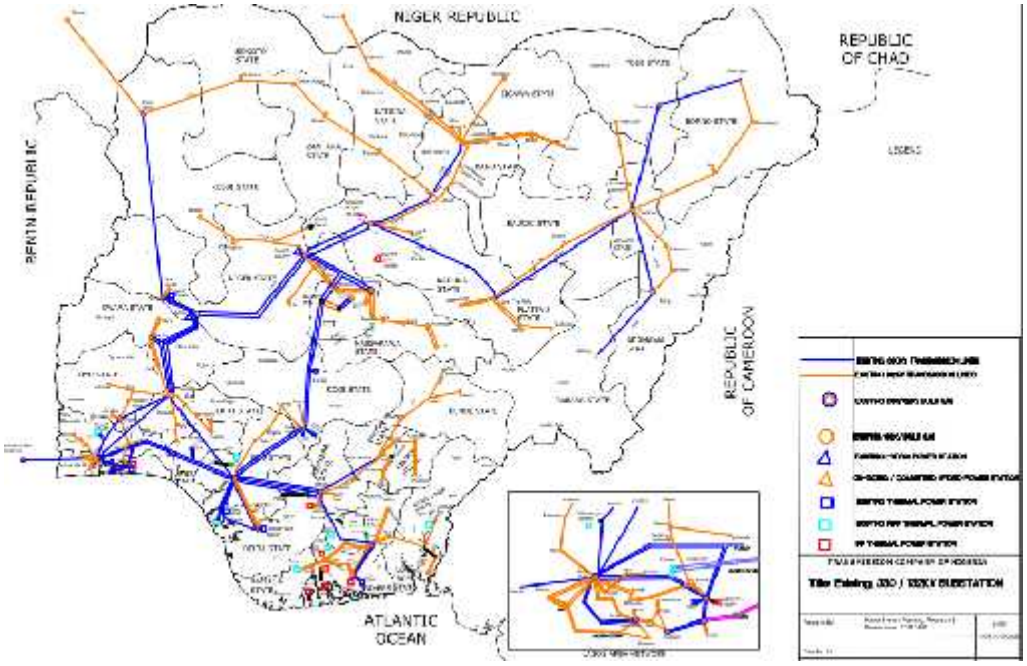
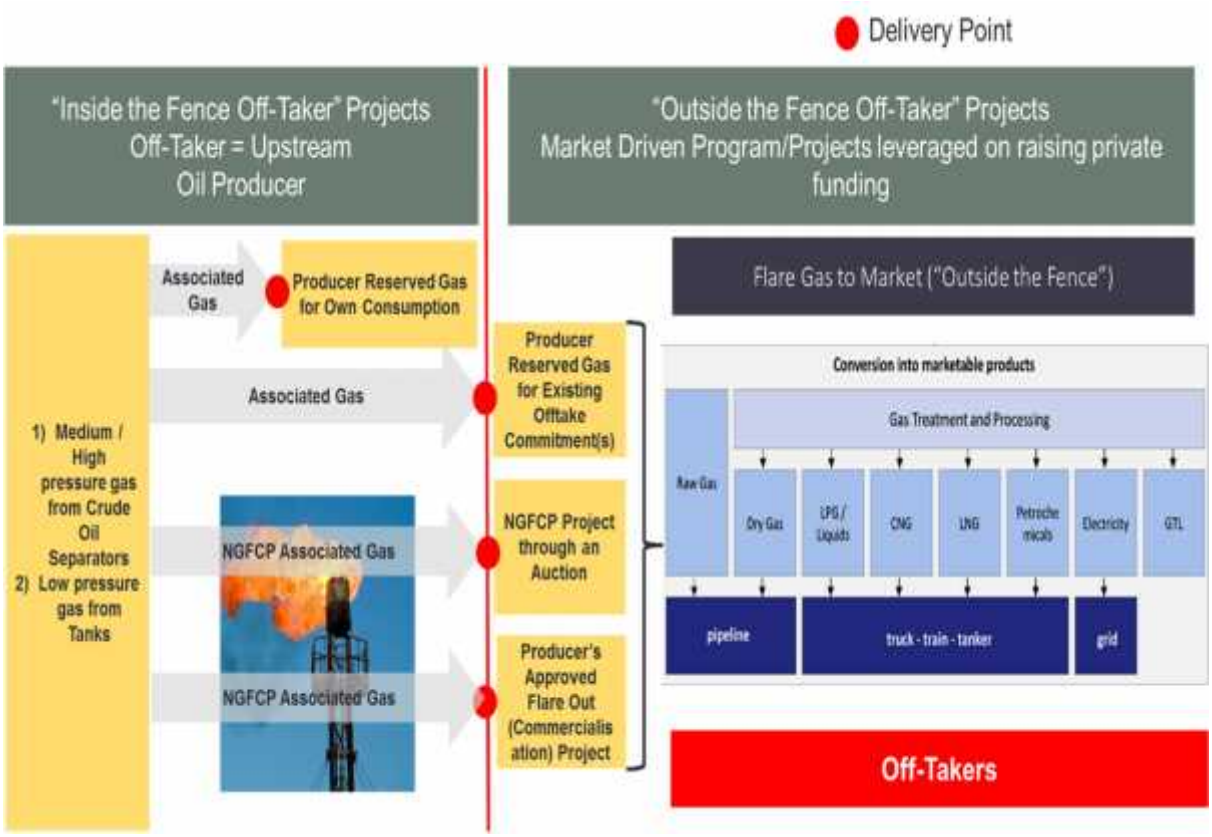


Figure 4: Flare Gas Monetisation Options



3 Nigerian Gas Flare Commercialisation Programme

3.1 Problem Statement and Government Response

When crude oil is produced, some gas associated is also produced with it. The crude oil production profile drives the production profile of such associated gas, together with the ratio of gas to crude oil. The primary objective of the operation is the production of crude oil and not associated gas. This is in contrast to non-associated gas production, the primary objective of which is to produce natural gas. Producers of associated gas may use it as a fuel in petroleum operations and/or re-inject it for enhanced oil recovery and other purposes. As an oil field matures and crude oil production declines, associated gas production declines with it, while the in-field need for gas use—as a fuel for electricity generation and/or re-injection for enhanced oil recovery—may rise, further reducing the amount of associated gas available for commercialisation.

Disruptions to oil production or oil transportation (such as closure of an oil pipeline) can curtail or stop associated gas production. If the global price of oil plummets, producers of high-cost oil may reduce or stop oil production, and production of associated gas would fall or stop correspondingly. Because producers of associated gas have less control over its production than producers of non-associated gas, one way of enhancing the security of supply would be to supplement associated gas with non-associated gas.

Against the supply risk, one advantage of associated gas is that it is cheaper to produce than non-associated gas because it is a by-product of oil production, and the cost of production can be shared between oil and gas. Where gas is being flared, the producer is attaching no value to the gas. This is the basis for the NGFCP: crude oil producers currently flaring gas are earning no revenue from gas. Using powers granted to the Minister of Petroleum Resources under the Petroleum Act, the FGN takes natural gas produced with crude oil free of cost at the flare and without payment of royalty.

There are approximately 180 flare sites in Nigeria. Crude oil producers in 2016 flared 289 billion standard cubic feet, or 789 mmscf/d, of associated gas, [16] which is about 8 percent of produced associated gas. In the ten years leading up to 2016, the volume of gas being flared has been halved. Analysis carried out for the NGFCP indicates that harnessing associated gas from the top 50 flare sites could reduce flare gas volumes by 80 percent.

[16] Page 61 in https://dpr.gov.ng/wp-content/uploads/2018/04/2016-Oil-Gas-Industry-Annual-Report.pdf.

Under the NGFCP, the FGN takes associated gas at the flare site (Flare Gas) free of charge and bids it out to third parties in the series of auctions, the first of which is the subject of the Request for Qualification (RFQ) that is being issued this month. Third parties will propose Projects and be selected on the basis of their technical and financial qualifications, soundness of the Project proposals, and several other criteria. The seller of the gas is the FGN (Seller), and crude oil producers supplying gas in the auctions are called Producers. The NGFCP has been designed to achieve the following objectives:

- Benefit the Niger Delta communities by reducing air pollution from gas flaring and creating jobs.
- Contribute to the Nigerian economy at large by delivering more gas to the domestic market for use by various sectors of the economy.
- Contribute to the global efforts to mitigate greenhouse gas emissions.

To that end, the FGN is taking the following steps:

- Put in place a programme that will enable and stimulate market-driven solutions. The NGFCP will not prescribe market applications nor markets for the Flare Gas, but will seek to attract technically and commercially viable and sustainable gas utilisation Projects with the primary objective of significantly reducing Flare Gas volumes.
- Avoid any adverse impact on the level or safety of Producers' oil and gas production.
- Put in place an open and transparent qualification and auction process to award Permits to Access Flare Gas to third parties.

3.2 The Process for the Current Auction

The auction starts with a Request For Qualification (RFQ). Those who submit Statements of Qualification (SOQs) and are deemed qualified by the FGN (referred to as Qualified Applicants) are then invited to respond to the Request for Proposals (RFP) that will be subsequently issued by the FGN. Table 1 outlines different stages of the bid process for this auction.

Table 1: Overview of the Bid Process

Stage	Description	Timeline
Registration	• Parties register interest in the NGFCP via the NGFCP Portal. A unique login and identification will be created during the registration for each registering party.	Q4 2018
RFQ	• Registered parties are eligible to download the RFQ documentation from the NGFCP Portal.	Q4 2018

	⁾ SOQs must be submitted by the SOQ submission deadline (**January 20, 2019**), together with payment of the SOQ submission fee of US$1,000 (one thousand) as specified in the Guideline for the Grant of Permit to Access Flare Gas. ⁾ Upon submission, a registered party becomes an Applicant ⁾ An Applicant may be a company or a Consortium of companies, limited to five companies or parties in any given Consortium.	
SOQ Evaluation and Qualification	⁾ SOQs submitted by the SOQ submission deadline will be evaluated according to the criteria set forth in the RFQ. The evaluation process is expected to be completed by **February 28, 2019** whereupon all Applicants will be advised on whether they have been awarded the Qualified Applicant status. ⁾ A list of the selected Qualified Applicants will be published on the NGFCP Portal. The FGN is not under any obligation to select Qualified Applicants. ⁾ The SOQ submission fees are not refundable to any Applicants unless the FGN in its discretion cancels the RFQ process before it is completed.	February 28, 2019
RFP	⁾ The RFP document and other supporting materials for the RFP will be issued on March 14, 2019. A Qualified Applicant will be able to access these documents from the NGFCP Portal. ⁾ Qualified Applicants will have the opportunity to provide written comments on the draft RFP document, to be received prior to the Bidders' Conference. The NGFCP has total discretion regarding whether and how to address comments received in its compilation of the final RFP document. ⁾ After paying to a designated Department of Petroleum Resources US Dollar account a single Data Prying Fee of US$2,000 (two thousand), as specified in the Guideline for Grant of Permit to	**Issue:** March 14, 2019

	Access Flare Gas, a Qualified Applicant may pry all Flare Gas Data in the Dataroom. • Qualified Applicants may select from flare sites in the Dataroom those from which it wishes to download Flare Site Data. Only after making payment of the Data Leasing Fee for each selected flare site will such download be permitted. The Data Leasing Fee, specified in the Guideline for the Grant of Permit to Access Flare Gas, is US$1,000 (one thousand) per flare site. • Qualified Applicants' use of the RFP Package (RFP document, Flare Site Data and any other supporting materials) is subject to the terms and conditions of the Confidentiality Agreement signed during the RFQ process. • Qualified Applicants are required to submit their proposals by June 30, 2019. Qualified Applicants may submit one or more Proposal(s), each of which must be in conformity with the RFP requirements including provision of a Bid Bond, thereby becoming a Bidder. • Qualified Applicants must make a Proposal processing fee payment, as stated in the Guideline for Grant of Permit to Access Flare Gas, for each single Proposal, multiple Proposals, or set of alternative Proposals. • A Bid Bond is required to be posted in respect of each Proposal at the time of its submission .	**Submit:** June 30, 2019
Bidders' Conference	• There will be a conference during which the NGFCP and the RFP will be discussed with Qualified Applicants.	April 8 – 9, 2019
RFP Evaluation and Award	• A **Proposals Evaluation Committee** will evaluate all Proposals submitted by the bid submission due date in accordance with a set of criteria that will be detailed in the RFP Package. • Following evaluation, Preferred Bidder status will be awarded by the FGN.	August 30, 2019

	• The FGN will return the Bid Bonds to all Bidders who were not selected as Preferred Bidders. • Following execution of the Commercial Agreements, payment of the Award Fee for Grant of Permit to Access Flare Gas, as specified in the Guidelines for Grant of Permit to Access Flare Gas, and the submission of the Milestone Bond, the Preferred Bidder, now Flare Gas Buyer, will be granted a Permit to Access Flare Gas, entitling it to start execution of its Project(s).	

Bidders will submit their Proposals through a two-envelope approach:

- Envelope 1 will contain the Technical and Commercial Proposal with the technical details, business case and all other underpinning economic assumptions of the proposed Project(s).

- Envelope 2 will contain the Financial Proposal, stating the price that the Bidder offers to pay for Flare Gas and the quantities of Flare Gas the Bidder offers to take through the prospective Gas Sales Agreement (GSA) as well as the take-or-pay quantity, which is the quantity of Flare Gas for each contract year during the contract period that a Flare Gas Buyer agrees to take or pay for Flare Gas from each flare site as specified in its GSA.

Evaluation of the Technical and Commercial Proposal will be strictly pass/fail with no differential values being attributed. The Financial Proposals will be opened only for those Bidders whose Technical and Commercial Proposals have passed. Evaluation of the Financial Proposals will include an implied value for greenhouse gas emission credits (referred to as the Shadow Emission Credit Price). The NGFCP assumes that the FGN will retain all emission reduction credits, which may be separately monetised. Preferred Bidders will be selected on the maximum aggregated value of the flare sites for which Bidders submit Proposals. The aggregate value will be determined as the net present value of the take-or-pay quantity (which can vary by contract year) multiplied by the sum of the Flare Gas price (which can also vary by contract year) and the Shadow emission credit price. Because the Shadow emission credit price is the same for all Bidders, it serves as another way of valuing the volume of Flare Gas that the Bidder commits to commercialising. Each Producer will provide the NGFCP the annual amounts of Flare Gas that it expects to have available ideally for a minimum duration of 15 years or until the expiration of the OML, whichever is earlier. The Flare Gas volume on offer will be split between Guaranteed Flare Gas and non-Guaranteed Flare Gas.

Bidders may submit Proposals for one or a set of flare sites. For each Proposal (to be presented for each flare site or a set of flare sites), the Bidder will need to include the following information:

- Guaranteed Gas and/or non-Guaranteed Gas volumes by year for each flare site or a cluster of flare sites (as relevant) that the Bidder intends to contract under the GSA
- The price the Bidder is committed to pay to the Seller for the Flare Gas (Guaranteed and non-Guaranteed) in US$ per mscf
- Take-or-pay obligation the Bidder is committed to under the GSA in mscf/d

The Minister of Petroleum Resources will establish the Proposals Evaluation Committee , which will evaluate all Proposals in accordance with evaluation criteria published in the RFP document.

Preferred Bidders will enter into the Commercial Agreements (Connection Agreement, GSA, Deliver-or-Pay Agreement if relevant, and Milestone Development Agreement), substantially in the form of the templates that will be included in the RFP. Preferred Bidders will be awarded a Permit to Access Flare Gas after having executed the Commercial Agreements.

Fees

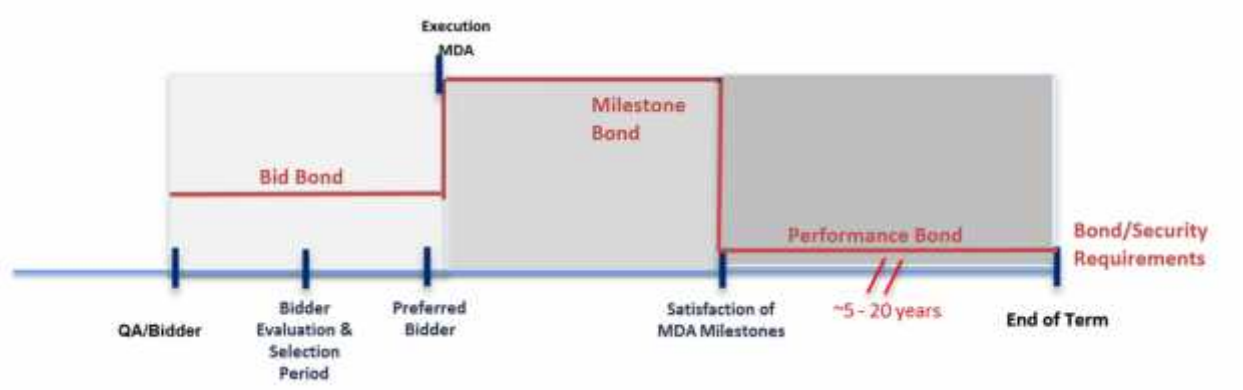
The following fees apply:

Type of Fee	**Amount**	**Observation**
SOQ submission fee	US$1,000	Per SOQ
Data Prying Fee	US$2,000	Onetime payment for all flare sites
Data Leasing Fee	US$1,000	Per flare site to obtain Flare Site Data
Proposal processing fee	US$1,000	Per single Proposal, each multiple Proposal, or set of alternative Proposals
The Award Fee for Grant of Permit to Access Flare Gas is based on a Project's Take or Pay commitment specified in the GSA	US$ 5,000 US$ 10,000 US$ 15,000 US$ 20,000	1,000 – 5,000 Mscf/d 5,000 – 10,000 Mscf/d 10,000 – 15,000 Mscf/d >15,000 Mscf/d

Bonds

As shown in Figure 5, the following Bonds apply:

Figure 5 Bonds



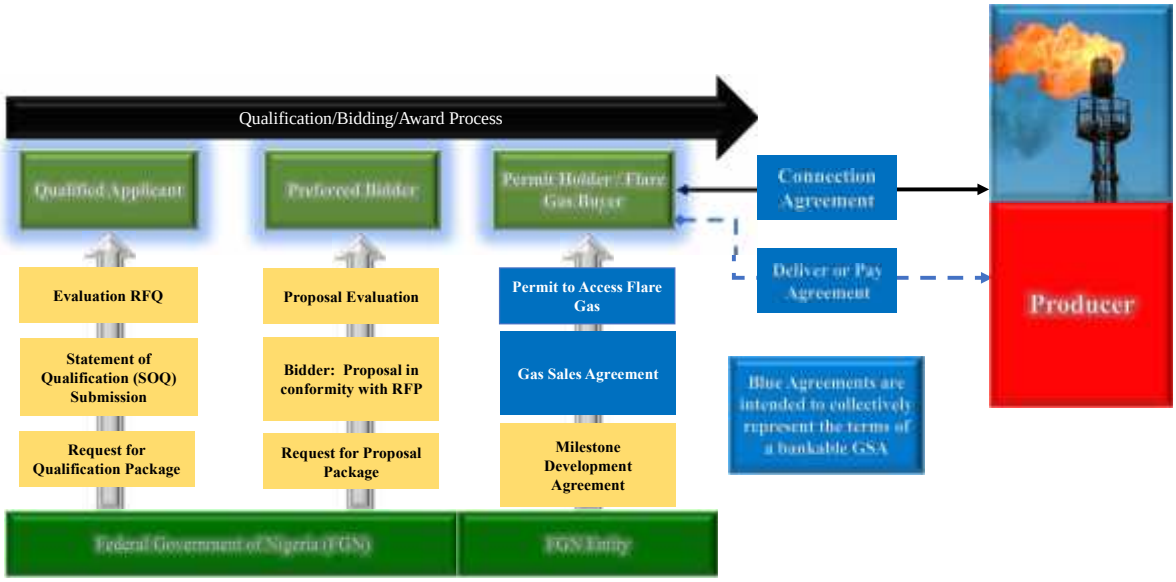
Type of Bond	Amount
Bid Bond	The Bid Bond shall be the lower of 1 percent of the Project's calculated capital cost and US$1,000,000.
Milestone Bond	The Bid Bond shall be the lower of 2 percent of the Project's calculated capital cost and US$2,000,000.
Performance Bond	The Performance Bond should cover three (3) months' gas delivery payments for the contracted take-or-pay Flare Gas quantity, to be increased to six (6) months upon any instance of payment default

NGFCP Transactional and Commercial Structure (Agreements)

Figure 6 is a schematic of the NGFCP transactional and commercial structure showing the agreements to be signed.

Figure 6: NGFCP Transactional & Commercial Structure

Key Transactional/Commercial Contracts – Contractual Structure



In addition, the Flare Gas Buyer will sign a Community Development Agreement. The agreements are described below. Template agreements with more details will be made available to Qualified Applicants in conjunction with the RFP.

3.2.1 Gas Sales Agreement

The Preferred Bidder, after having executed the Commercial Agreements and having been granted the Permit to Access Flare Gas, will become a Flare Gas Buyer and will purchase Flare Gas from the Seller through a GSA. The GSA is a contract to purchase Flare Gas from the FGN at a price that the Preferred Bidder has bid in its Proposal in response to the RFP. The Preferred Bidder will also agree to a take-or-pay provision at a level stated in its Proposal.

Performance Security

For the Flare Gas Buyer's obligations under the GSA, the Seller will require a Performance Bond in advance to cover three (3) months' gas delivery payments for the take-or-pay Flare Gas volume contracted for, to be increased to six (6) months upon any instance of payment default. If there is a payment default and/or the Performance Bond is not posted or it is drawn and not

replenished within the cure period, the FGN will cancel the GSA and re-bid the Flare Gas in a subsequent auction round.

Take-or-Pay Obligation of the Flare Gas Buyer

Bidders will be required to stipulate the minimum percentage of the bid quantity that they are committed to take as a take-or-pay quantity. It must, however, be no less than 80 percent of the quantity bid for.

The Flare Gas Buyer will be required to take (annually) the minimum take-or-pay quantity. Failure to do so will result in the Flare Gas Buyer paying the product of the Flare Payment price of US$ 0.50 per mscf and the quantity not taken below the minimum take-or-pay quantity obligation in any one year.

As the FGN and not the Producer is the owner and Seller of this Flare Gas, the GSA on its own does not provide Flare Gas supply security to the Flare Gas Buyer. However, the Deliver-or-Pay Agreement offered by the Producer does provide Flare Gas Buyer with some supply security.

3.2.2 Milestone Development Agreement

The Milestone Development Agreement is signed by a Preferred Bidder and FGN, and relates to the execution of the selected Project according to its terms and conditions. Through a Milestone Bond, the Preferred Bidder provides a financial guarantee to the FGN to underpin its commitment to milestones for the implementation of the Project.

3.2.3 Connection Agreement

The interconnection facilities between the Producer and the Flare Gas Buyer are referred to as the gas connection assets. They consist of the connection assets of each party. The assets from the Flare Gas Connection Point to the custody transfer point will be referred to as Producer Gas Connection Assets, and assets downstream of the custody transfer point will be referred to as Buyer Gas Connection Assets. The Connection Agreement concerns only the Producer Gas Connection Assets. The Producer will enter into a Connection Agreement with the Flare Gas Buyer that, among other conditions, will authorise the Flare Gas Buyer to build a gas connection from the Flare Gas Connection Point to a Delivery Point. The Delivery Point will serve as the custody transfer point between Producer and the Flare Gas Buyer, and is where there will be a custody transfer meter with an accuracy to be determined by the Department of Petroleum Resources in the Guidelines to the Flare Gas (Prevention of Waste and Pollution) Regulations 2018. The Delivery Point will be within a designated area at the edge of the secure area of the property of the Producer.

Producer Gas Connection Assets must meet the following criteria:

- The design must meet engineering best practice and standards as established by Department of Petroleum Resources.
- The design must meet standard health, environment and safety protocols (for which the Flare Gas Buyer and the Producer will jointly carry out a hazard and operability study).
- The Flare Gas Buyer must procure equipment and material from the Producer's approved vendor list.
- The assets must be built by a construction contractor approved by the Producer which approval cannot be unreasonably withheld.

The Flare Gas Buyer will engineer, procure and construct the Buyer Gas Connection Assets. The Flare Gas Buyer will also engineer, procure and construct the Producer Gas Connection Assets at its cost and hand over their title and ownership to the Producer upon the start of commercial operation. The Producer will be responsible for operation and maintenance of the Producer Gas Connection Assets, for which it will receive a handling fee from the Flare Gas Buyer under the Connection Agreement. The Producer will make available and deliver Flare Gas at the Delivery Point for the term of the Permit to Access Flare Gas, whichever comes earlier.

If additional Flare Gas Buyers join in subsequently (for instance, associated gas production increases), a separate Delivery Point will be established for each additional Flare Gas Buyer. Each additional Flare Gas Buyer will pay the initial Flare Gas Buyer an amount proportional to its share of the shared Producer Gas Connection Assets (as a partial refund of the connection costs). All Flare Gas Buyers will pay full handling fees to the Producer.

3.2.4 Deliver-or-Pay Agreement

The NGFCP offers a mechanism whereby a Producer can offer Guaranteed Flare Gas, which will come with a guarantee of quantity and composition range. Any other other Flare Gas delivered by the Producer to Flare Gas Buyer will be on an as-available basis. For Guaranteed Flare Gas, limits will be placed on the following.

If the gas delivered by a Producer who has signed a Deliver-or-Pay Agreement fails to meet the guarantee on composition range, the following outcomes are possible:

- The deliver-or-pay obligation will not apply to such gas.
- If the Flare Gas Buyer accepts such off-specification gas, the Producer will pay the Flare Gas Buyer a pre-established percentage of the deliver-or-pay payment amount.
- If the Flare Gas Buyer rejects such off-specification gas, the Producer will either pay the full deliver-or-pay payment amount to the Flare Gas Buyer, or opt to carry out whatever treatment is required to bring the Flare Gas within the agreed specification range.

The specifications in the Deliver-or-Pay Agreement may not be sufficient to enable the gas to meet “pipeline quality”. Flare Gas Buyers needing a gas specification more stringent than the limits set in the NGFCP will be expected to provide their own gas treatment facilities.

3.2.5 Community Development Agreement

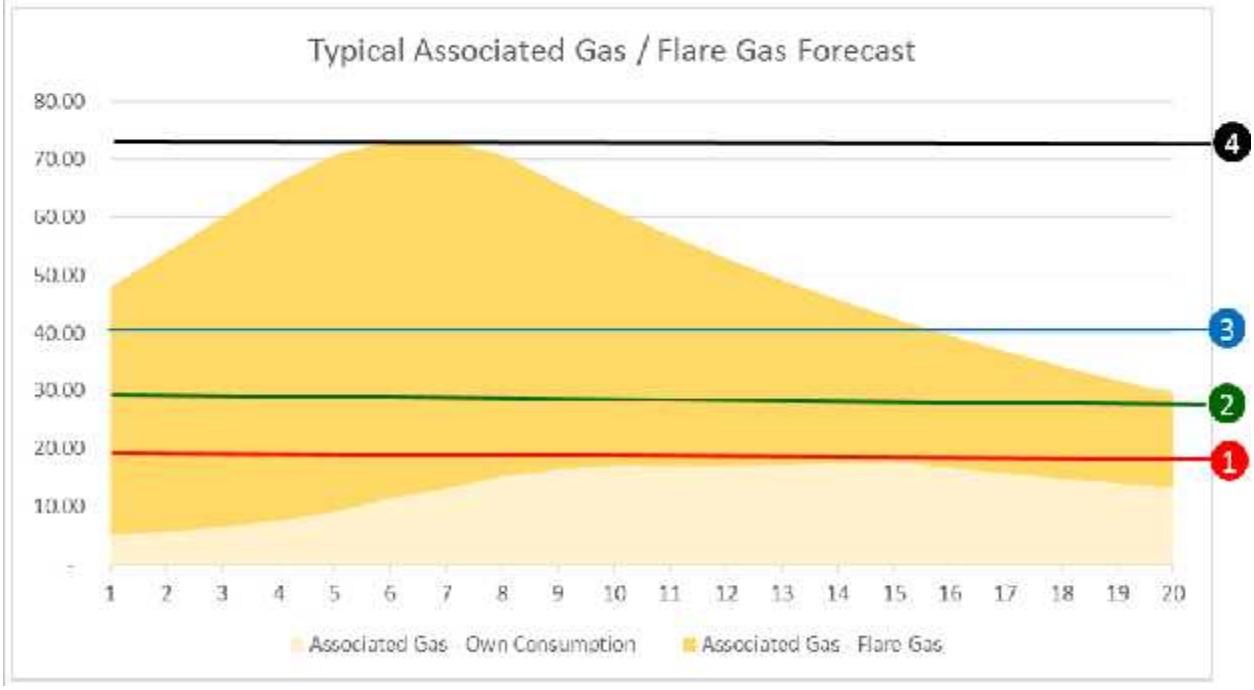
One objective of the NGFCP is to provide sustainable value to the local communities within the area impacted by the flare sites. A Community Development Fund will be setup, which will be funded through a payment made by the Project in proportion to the contracted Flare Gas quantity as specified in the GSA. Each Project must sign a Community Development Agreement with the relevant community(ies) for a corresponding Community Development Plan to be approved by the NGFCP.

3.3 Considerations in Commercialising Flare Gas

3.3.1 Long term competitive fuel/feedstock supply

Critical to funding and developing a gas-to-market project is securing the gas supply. In non-associated gas projects, the focus is producing gas and selling dry gas and natural gas liquids. The sustainable long-term gas supply is determined by the recoverable proven reserves and how well the producer is operating the fields. By contrast, because the primary objective of a producer of associated gas is crude oil production and sale, there are more uncertainties for the supply of associated gas, as shown in Figure 7.

Figure 7: Flare Gas Tranches



Note:

- **Below 1:** Associated gas used (reserved) by the Producer
- **Between 1 and 2:** With the risk/reward structure the Producer may offer this tranche as Guaranteed Flare Gas to Flare Gas Buyer(s)
- **Between 2 and 3:** With the right incentive and commercial and contractual structure
- **Between 3 and 4: Creative** business models/technological solutions are needed to monetise this tranche

To mitigate the typical additional risks (and the corresponding costs) in commercialising Flare Gas, it will have to be priced competitively. Because of greater supply security, gas sales agreements for non-associated gas can be for large quantities, enabling projects to take advantage of economies of scale across the supply chain, including the end user. For example, the gas may be sold to a large power plant, the unit construction cost of which declines with increasing size. This enables the purchaser of the gas (a power generation company in this example) to pay more for natural gas and still make an acceptable rate of return. Typical power generation plants relying only on non-associated gas will be smaller, raising unit costs. Higher costs elsewhere mean that the price of gas so supplied has to be correspondingly lower. The NGFCP allows the Bidders to assess how much the market can bear for the prices of gas offered in determining the bid prices of gas in the Proposals.

Less certain supply security also means that Project proponents need to consider scope for flexibility down to the final end-user. If, for example, supply disruptions are extremely damaging

to a customer down the supply chain two or more steps removed from the Bidder, an alternative project may be sought or else a way of enhancing supply security may have to be found. For these reasons, examining commercial viability across the supply chain is important in the NGFCP, and this will be one of the considerations in evaluating Proposals.

3.3.2 Options for Commercialisation

There are many project types for the NGFCP. Many will target the domestic market, but some are suitable for export, such as projects that:

- Substitute higher-cost fuels, such as gasoline and diesel fuel currently being used in captive power generation and diesel and fuel oil used in industries.
- Provide new sources of LPG (which may substitute imported LPG or add to the current supply).
- Provide natural gas to new businesses, especially in areas currently without access to gas pipelines. Natural gas may be transported not only through pipelines, but also in the form of CNG and LNG. Depending on the relative prices of liquid fuels, natural gas may also be competitive as an automotive fuel.
- Transform natural gas to other products (electricity, petrochemicals, fertilisers) to meet unmet demand. One example is providing power generated from modular small-scale power generation units to local communities that lack access to grid electricity.

The prices that can be charged under the Projects depend on what creditworthy off-takers are willing to commit to and the prices of competing fuels and end-products. Potential investors and lenders are responsible for assessing how much every stage of the entire supply chain can bear, and not just the off-taker for the Project.

Glossary

Terminology	Definitions
Applicant	A registered party who submits a SOQ
Award Fee for Grant of Permit to Access Flare Gas	A fee set by and paid to Department of Petroleum Resources by the Permit Holder to obtain the Permit to Access Flare Gas
Bid Bond	A bond posted by a Bidder and accompanying its Proposal into the RFP
Bidder	A Qualified Applicant that has presented a Proposal in conformity with the requirements of this RFP
Bond	A Bid Bond, a Milestone Bond, or a Performance Bond
Buyer Gas Connection Assets	The natural gas pipeline used to transport Flare Gas from the Delivery Point at the perimeter of the flare site to the Project Facility and any other equipment, machinery or other property of any kind that are owned or leased by Flare Gas Buyer to take delivery of Flare Gas under the Connection Agreement
Captive Power Generation	Means a captive power plant which is a facility that is dedicated to providing a localised source of power to an energy user. The plant may operate in grid parallel mode with the ability to export surplus power to the local electricity distribution network. Alternatively, it may have the ability to operate in island mode; i.e. independently of the local electricity distribution system
Commercial Agreements	Each of the Milestone Development Agreement, Gas Sales Agreement, Connection Agreement, and (if applicable) the Deliver-or-Pay Agreement.
Community Development Agreement	An agreement between the Flare Gas Buyer and the community(ies) dealing with the

Terminology	Definitions
	transfer of some economic and social benefits of the Project to the community(ies)
Community Development Fund	Fund managed by the Flare Gas Buyer and the community(ies) to develop activities laid out in the Community Development Agreement
Community Development Plan	The development plan for the community(ies) as appended to the Community Development Agreement
Confidentiality Agreement	Confidentiality agreement signed by an Applicant in connection with an Applicant's submission of its Statement of Qualification
Connection Agreement	An agreement conforming substantially to the template appended to the RFP document which is entered into by and between a Producer and a Flare Gas Buyer with respect to the connection of the respective facilities of the Producer and the Flare Gas Buyer through the Gas Connection Assets
Data Leasing Fee	Fee paid by a Qualified Applicant to Department of Petroleum Resources for the purpose of leasing Flare Site Data
Data Prying Fee	Fee paid by an Qualified Applicant to Department of Petroleum Resources for the purpose of prying Flare Site Data
Dataroom	The virtual data room in the Department of Petroleum Resources which houses the Flare Site Data, the RFP Document and the RFP Supporting Materials
Deliver-or-Pay Agreement	An agreement that the Producer may sign with the Flare Gas Buyer under which the Producer guarantees to supply an agreed quantity of Flare Gas to the Flare Gas Buyer, and within agreed composition limits

Terminology	Definitions
Delivery Point	Point within the Measuring Station at which the title of the Flare Gas passes from the Seller to the Flare Gas Buyer
Department of Petroleum Resources	A department of the Federal Ministry of Petroleum Resources or any successor entity that has statutory responsibility for ensuring compliance with petroleum laws, regulations and guidelines related to the oil and gas industry Nigeria
Flare Gas	Any natural gas produced in association with crude oil by a Producer and finally diverted toward a flare site by the Producer with the intent of the natural gas being flared
Flare Gas Buyer	The entity who, after having executed the Commercial Agreements and having been granted the Permit to Access Flare Gas, will purchase Flare Gas from the Seller through the Gas Sales Agreement
Flare Gas Connection Point	The point where the gas connection assets tie into the facilities of the Producer
Flare Site Data	The data, including Flare Gas forecast quantities, for a specified flare site which the Department of Petroleum Resources makes available in the Dataroom.
Gas Sales Agreement	An agreement whereby Flare Gas is sold by the Seller to the Flare Gas Buyer conforming substantially to the template appended to the RFP document
Guaranteed Flare Gas	Flare Gas for which a Producer guarantees volume and composition limits
Marginal Field	An oil field in an Oil Mining Lease designated as a marginal field by the FGN
Measuring Station	A gas measuring, control and registering station funded, designed, equipped and built according to industry standards by the Flare Gas Buyer. This station incorporates the

Terminology	Definitions
	Delivery Point and is located within the Producer's property at the perimeter of the flare site and forms part of the Producer Connection Assets. This station, also referred to as the custody transfer meter, registers pressure, temperature, flow rate, and other parameters
Milestone Bond	A performance bond posted by the Flare Gas Buyer as defined in the Milestone Development Agreement
Milestone Development Agreement	An agreement signed between Seller and the Flare Gas Buyer by means of which the Flare Gas Buyer commits to design and construct a Flare Gas utilisation facility according to specific milestones
NGFCP Portal	The website hosted by the Department of Petroleum Resources on which information about the NGFCP is published and through which Applicants, Qualified Applicants and Bidders communicate with the NGFCP, and access the RFP Package
Oil Mining Lease	A lease granted by the Minister of Petroleum Resources to a company which allows such company to search for, win, work, carry away, and dispose of crude oil
Performance Bond	A payment security lodged by Flare Gas Buyer as an obligation under the GSA
Permit to Access Flare Gas	A permit granted to a company by the Minister of Petroleum Resources to take Flare Gas at a flare site on behalf of the FGN
Preferred Bidder	A Bidder whose Proposal for one or more flare site(s) has been selected through the NGFCP auction process
Producer	A holder of Oil Mining Lease or allotee of a Marginal Field or a contractor under a Production Sharing Contract
Producer Gas Connection Assets	The pipeline, equipment, machinery, other assets or facilities including the Measuring

Terminology	Definitions
	Station designed, funded and built by the Flare Gas Buyer and used to transport Flare Gas from the Flare Gas Connection Point to the Delivery Point under the Connection Agreement. Title, care and custody of these assets are transferred by the Flare Gas Buyer to the Producer upon the start of commercial operation
Production Sharing Contract	An agreement between Nigerian National Petroleum Corporation and a third party for the exploration, development and production of Petroleum whereby the proceeds of production is allocated to the parties for the payment of royalty and tax, the recovery of cost and sharing of profits
Project	A Flare Gas utilisation project developed by the Flare Gas Buyer as identified in the Proposals or the relevant Commercial Agreements
Proposal	Proposal submitted by a Qualified Applicant in response to the Request for Proposals
Proposals Evaluation Committee	The committee duly constituted by the Minister of Petroleum Resources for the purpose of evaluating the SOQs presented by the Applicants to determine Qualified Applicant status and evaluating the Proposals to determine those Bidders that achieved Preferred Bidder status
Qualified Applicant	An Applicant that passes the compliance, technical, financial and other evaluations referred to in the RFQ
RFP Package	The RFP document, RFP supporting materials, and the Flare Site Data
Seller	An entity owned and nominated by the Federal Government of Nigeria as the Seller of the Flare Gas to the Flare Gas Buyer
Shadow emission credit price	Carbon price in US$/mscf as specified in the RFP document for the purpose of evaluating

Terminology	Definitions
	Proposals and applied over the take-or-pay quantity