GUIDELINES FOR FLARE GAS MEASUREMENT AND REPORTING IN MIDSTREAM PETROLEUM OPERATIONS

ISSUED BY

THE NIGERIAN MIDSTREAM AND DOWNSTREAM PETROLEUM REGULATORY AUTHORITY

2026

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NIGERIAN MIDSTREAM AND DOWNSTREAM PETROLEUM REGULATORY AUTHORITY (NMDPRA)	Applicable to all Midstream Petroleum Operations
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1. INTRODUCTION

1.1 Purpose

The purpose of these Guidelines is to provide the criteria, requirements, and obligations of Licensees and Permit Holders under midstream petroleum operations with respect to flare gas measurement, data reporting, data collection and payment pursuant to the Petroleum Industry Act 2021, Midstream and Downstream Petroleum Operations Regulations, 2025 and other relevant Regulations. The provisions of these Guidelines will enable flare mitigation, collection of flare gas penalties, environmental compliance, and data collection standards for flare gas.

1.2 Scope

These Guidelines are applicable to flare gas management for **refineries, bulk petroleum liquids storage, bulk gas storage, gas processing, gas conditioning, and other facilities used for midstream petroleum liquids and gas operations.** It covers flare measurement, reporting, data collection standards and permit to flare, Provisions for flare gas limits and mechanism for flare payment and non-compliance.

2. FLARE MANAGEMENT

2.1 *Overview of Requirements for Flare Gas Management*

The following are the requirements for flare gas management in midstream oil and gas facilities: The Licencees shall

a. prior to the commissioning of facility and commencement of operations: -
   i. ensure the installation of an approved metering systems for measurement of flare gas V_{fl}.
   ii. consult with the Authority to determine daily flare gas limit (V_{set}) (the maximum number of flaring events and quantity of gas to be flared).
b. maintain daily, monthly, and annual records of flared gas in line with section 2.6 of these Guidelines and submit monthly report to the NMDPRA, no later than 21 days from the end of each month.
c. prior to any flaring events (V_{ev}), obtain a 'permit to flare gas' in line with section 2.5 of these Guidelines.

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d. calculate the excess flare gas (V_{ex}) in line with section 2.4 of these Guidelines and ensure payment of applicable penalties into the MDGIF account, with evidence of payment submitted to the NMDPRA, no later than 21 days from the end of the month.

2.2 Flare Gas Measurement (V_{fl})

The flare gas volume from a facility shall be measured with an approved metering system.

2.3 *Computation Flare Gas limit (V_{set})*

The allowable gas flared from midstream petroleum operations, which is a sum of:

$$V_{set} = V_{pi} + V_{up} + V_{ev} \quad (1)$$

Where:

V_{set} = Allowable volume of flare gas from midstream facilities.

V_{pi} = Volume of Pilot gas for midstream facilities.

V_{up} = Measured flared gas during upset. These include gas flared due to unplanned operational disturbances:

i. Equipment malfunction or failure (compressor trip, valve failure, etc.).
ii. Sudden pressure surges.
iii. Power outage or process control loss.

V_{ev} = Controlled flare gas volumes due to known events as approved by NMDPRA. These include gas flared due to:

i. Planned maintenance.
ii. Facility start-up.
iii. Strategic operational reasons as testing, with prior advance consent of the Authority.
iv. Other conditions the Authority may approve.

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2.4 Flare Gas Penalty

2.4.1 Determination of Excess Flare Gas (V_{ex})

i. The excess flare gas (V_{ex}) is the volume of gas flared above the flare limit, and which shall be subject to gas flare penalty.

ii. V_{ex} is computed as follows:

$$V_{ex} = V_{fl} - V_{set} \quad (2)$$

(V_{fl}) = daily flare gas volumes

(V_{set}) = flare gas limit.

iii. Where V_{set} has not been approved by the Authority within three months from effective date of the Guidelines.

$$V_{ex} = V_{fl} \quad (3)$$

iv. In the absence of an approved flare measurement system, the Authority shall estimate gas flare volumes. This will include flares from emergency and maintenance activities, which shall not be excluded from applicable penalty calculation. Additionally, Regulation 18 (2) of the Petroleum Measurement Regulations 2023 shall apply.

2.4.2 Payment of Flare Gas Penalty

i. The penalties calculated in paragraph 2.4.1 shall be paid to the MDGIF.

ii. The evidence of payment of penalty fees shall be submitted to the Authority no later than 21 days from the end of the month. This shall be sequel to the signoff of the flare gas report.

2.5 *Flare Gas Permit Application*

The Flare gas permit shall be obtained prior to any flaring of gas during events (V_{ev}).

The following shall be provided:

i. Detailed information of the flare site or flare system.

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ii. Estimated volume of gas to be flared and expected duration of flaring.

iii. Evidence of Payment of Application Fees (NGN 100,000)

2.6 *Reporting*

2.6.1 Monthly Flare Reporting

i. The Operator shall maintain a daily log; the format and manner of all logs shall be in conformity with the metering and data collection standards.

ii. Records of the daily report as shown in Appendix 4 shall be maintained at the facility for monthly audit and signed off by the Authority's representative.

iii. The report in (ii) shall be submitted to the Authority on a monthly basis, no later than 21 days from the end of the month.

iv. A licensee or permit holder shall maintain the gas flaring logs for a period of not less than 36 months

2.6.2 Emergency Flare Reporting

All emergency flare events shall be reported to the Authority within 24 hours of occurrences. The details shall include as follows

i. Cause of flare

ii. Duration

iii. Volume

iv. Mitigation measures

3. SANCTIONS

Non-compliance with the requirements of these Guidelines shall be deemed as violations to relevant sections of the Petroleum Industry Act 2021, Midstream and Downstream Petroleum Operations Regulations, and other Regulations. These violations may result in applicable consequence management, including, but not limited to, fines, penalties and/or revocation of licence.

Where a penalty demand order is issued by the Authority, failure to comply with such penalty demand order shall attract a 20% surcharge penalty for each day of non-compliance.

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4. APPENDIXES

4.1 *Appendix 1: Example of Computation Gas Flare Penalties (V_{ex})*

i. When V_{ex} ≤ 1 million standard cubic feet (1 MMSCF), the penalty fee shall be **$0.50** per 1,000 SCF.
Example: If V_{ex} = 0.9 MMSCF (900,000 SCF),
Penalty = 900 × $0.50 = $450.

ii. When 1 MMSCF < V_{ex} ≤ 10 MMSCF, the penalty fee shall be **$1.00** per 1,000 SCF.
Example: If V_{ex} = 9 MMSCF (9,000,000 SCF),
Penalty = 9,000 × $1.00 = $9,000.

iii. When V_{ex} > 10 MMSCF, the penalty fee shall be **$1.50** per 1,000 SCF.
Example: If V_{ex} = 20 MMSCF (20,000,000 SCF),
Penalty = 20,000 × $1.50 = $30,000.

4.2 *Appendix 2: Authority and MDGIF Account Details*

4.2.1 Flare Permit Application Fees

PURPOSE OF PAYMENT	FLARE PERMIT APPLICATION FEES
Account Name	Nigerian Midstream and Downstream Petroleum Regulatory Authority
Account Number (NGN)	3000122298
BANK	CENTRAL BANK OF NIGERIA (CBN)

4.2.2 Flare Gas Penalty

PURPOSE OF PAYMENT	FLARE GAS PENALTY
Account Name	Midstream and Downstream Gas Infrastructure Fund (MDGIF)
Account Number ($)	0010295404022

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4.3 *Appendix 3: Daily Flare Gas Reporting*

Table 4-1: Daily Flare Gas Reporting Template

..... Facility

Month ..... **Year.....**

S/N	Day	Volume of gas received for processing (MMSCFD)	Total Volume of Gas Flared (MMSCFD)	Reasons for any possible excessive flaring during the day
1.	Day 1			
2.	Day 2			
3.	Day 3			
4.	Day 4			
5.	Day 5			
6.	Day 6			
7.	Day 7			
8.	Day 8			
9.	Day 9			
10.	Day 10			
11.	Day 11			
12.	Day 12			
13.	Day 13			
14.	Day 14			
15.	Day 15			
16.	Day 16			
17.	Day 17			
18.	Day 18			
19.	Day 19			
20.	Day 20			
21.	Day 21			
22.	Day 22			

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23.	Day 23			
24.	Day 24			
25.	Day 25			
26.	Day 26			
27.	Day 27			
28.	Day 28			
29.	Day 29			
30.	Day 30			
31.	Day 31			
Total				

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5. GLOSSARY

Abbreviations, terms, and references used in this document

MDGIF	Midstream and Downstream Gas Infrastructure Fund
MMSCFD	Million standard cubic feet per day
NGN	Naira
NMDPRA	Nigerian Midstream and Downstream Petroleum Regulatory Authority
SCF	Standard Cubic Foot
PIA	Petroleum Industry Act 2021

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Approved by	
Engr. Saidu.A. Mohammed **(Authority Chief Executive, Nigerian Midstream and Downstream Petroleum Regulatory Authority)**	Signed **Date** 15-01-2026

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