



**Monitoring report form
(Version 05.1)**

MONITORING REPORT

Title of the project activity	Afam Combined Cycle Gas Turbine Power Project	
UNFCCC reference number of the project activity	5645	
Version number of the monitoring report	01	
Completion date of the monitoring report	17/02/2017	
Monitoring period number and duration of this monitoring period	Monitoring Period No. 2 1/11/2013 – 31/12/2015	
Project participant(s)	The Shell Petroleum Development Company of Nigeria Limited (SPDC). SPDC is a joint venture between: • Nigerian National Petroleum Corporation (NNPC) 55% • Shell Nigeria (a subsidiary of Royal Dutch/ Shell plc) 30% • Elf Petroleum Nigeria Limited (EPNL, a subsidiary of TOTAL S A) 10% • Agip (a subsidiary of ENI SpA) 5%	
Host Party	Federal Republic of Nigeria	
Sectoral scope(s)	01: Energy Industries (renewable / non-renewable sources)	
Selected methodology(ies)	AM0029: "Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas" (version 03)	
Selected standardized baseline(s)	Not applicable	
Estimated amount of GHG emission reductions or net GHG removals by sinks for this monitoring period in the registered PDD	1,192,425tCO ₂ e	
Total amount of GHG emission reductions or net GHG removals by sinks achieved in this monitoring period	GHG emission reductions or net GHG removals by sinks reported up to 31 December 2012	GHG emission reductions or net GHG removals by sinks reported from 1 January 2013 onwards
	-	904,944 tCO ₂ e

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

The purpose of the project activity is the built 650 MW grid-connected combined-cycle gas turbine (CCGT) fuelled by natural gas which reduces greenhouse gas emissions because the CO₂ volumes emitted for each unit of electricity generated by the CCGT plant are lower than the quantity of CO₂ emissions that would otherwise be emitted by generating the same quantity of electricity from the baseline OCGT plant.

The project activity (construction of a CCGT plant), while the fuel is the same (natural gas) as the OCGT plant, the emission reduction arises from the greatly improved thermal efficiency.

Installed technology and equipment:

The installed technology) includes: 3 X 150MW Alstom 13E2 gas turbines (commissioned in 22/07/2009) and 1 X 200MW steam turbine (commissioned in 04/07/2010) with a heat recovery system. The technology is of an international standard and installed with dry low NOX combustion equipment.

Table 1: Make, Type and Serial Numbers of all the major components of the Project Activity

S/N	Meter Description	Make	Type	Serial No.
1	Ultrasonic Gas Flow Meter (FC _{f,y})	Elster-Instromet	2000	(FM 11) – 0B73 (3433) (FM 12) – 444C (3432)
	Gas Turbine Flow Meters	Elster-Instromet	SM-RI-X-K G1600-200- 44,6-K -120	(GT11)-10506153-2006 (Old) (GT11)-10506156-2006 (Installed 03/2015) (GT12)-10506156-2006 (Old) (GT12)-10509681-2007 (Installed 03/2014) (GT13)-10506157-2006
2	Gas Turbine GT11	Alstom	GT13E2	G00301
3	Gas Turbine GT12	Alstom	GT13E2	G00304
4	Gas Turbine GT13	Alstom	GT13E2	G00305
5	Steam Turbine	Alstom	DK2-2N33G	GM002506
6	Gas Turbine Generator (GT11)	Alstom	50WY21Z-092	HM301456
7	Gas Turbine Generator (GT12)	Alstom	50WY21Z-092	HM301462
8	Gas Turbine Generator (GT13)	Alstom	50WY21Z-092	HM301465
9	Steam Turbine Generator	Alstom	50WY232-109	GM224506

Relevant dates for the project activity since CDM registration:

Table 2: Key events since CDM registration

Date (s)	Activities
09/12/2005	Start date of the project activity
22/07/2009	Commission of the Gas Turbines (GT11, GT 12 and GT 13) units
04/07/2010	Commission of the Combined Cycle mode
29/10/2012	Registration of the project activity under the CDM by the UNFCCC Secretariat
01/11/2012	Starting date for crediting
1/11/2012 – 31/10/2013	1 st Monitoring Period
1/11/2013 – 31/12/2015	2 nd Monitoring Period (this monitoring period)

Total emission reduction achieved in this monitoring period

The current monitoring period is the second monitoring period of the project that covers 01/11/2013 to 31/12/2015. In this monitoring period, the project achieved a total emission reductions of 904,944 tCO₂e tCO₂e.

A.2. Location of project activity

Host Party

The Host Party is the Federal Republic of Nigeria.

Region/State/Province, etc.

The project is located in Oyigbo Local Government Area (LGA) of Rivers State.

City/Town/Community, etc.

The power plant is built in Afam area of the community

Physical/Geographical location

The project is approximately 30 km northeast of Port Harcourt, the capital of Rivers State, and lies roughly between 7.2545 E, 4.8480 N and 7.2600 E, 4.8525 N decimal degrees respectively.

A.3. Parties and project participant(s)

Party involved (host) indicates a host Party)	Private and/or public entity(ies) project participants (as applicable)	Indicate whether the Party involved wishes to be considered as project participant (yes/no)
Federal Republic of Nigeria (host)	The Shell Petroleum Development Company of Nigeria Limited (SPDC). SPDC is a joint venture between: • Nigerian National Petroleum Corporation (NNPC) 55% • Shell Nigeria (a subsidiary of Royal Dutch/ Shell plc) 30% • Elf Petroleum Nigeria Limited (EPNL, a subsidiary of TOTAL S A) 10% • Agip (a subsidiary of ENI SpA) 5%	No

A.4. Reference of applied methodology and standardized baseline**Approved methodology:**

The methodology applied for this project activity is AM0029 "Baseline Methodology for Grid Connected Electricity Generation Plants using Natural Gas" (Version 03).

Tools:

As per the applied methodology, the following specific tools have been applied:

- Tool to calculate the emission factor for an electricity system (version 5.0)
- Tool for the demonstration and assessment of additionality (version 7.0)

A.5. Crediting period of project activity

Crediting Period: 01/11/2012 – 31/10/2022

Length of crediting period: The crediting period is fixed type at ten years (120 months) from the beginning of project operations

Start date: 01/11/2012

Current Monitoring period: 01/11/2013 to 31/12/2015

A.6. Contact information of responsible persons/entities

The contact information of responsible persons/entities is:

Paul Parks
 Carbon-Limits Nigeria, Ltd.
 Plot 13/14, Ligali Ayorinde Street
 Victoria Island, Lagos
 Nigeria
 Telephone number: + (234) 1 279 8969

While Carbon-Limits Nigeria is responsible for the completion of the MR form, it is not a project participant for the project activity.

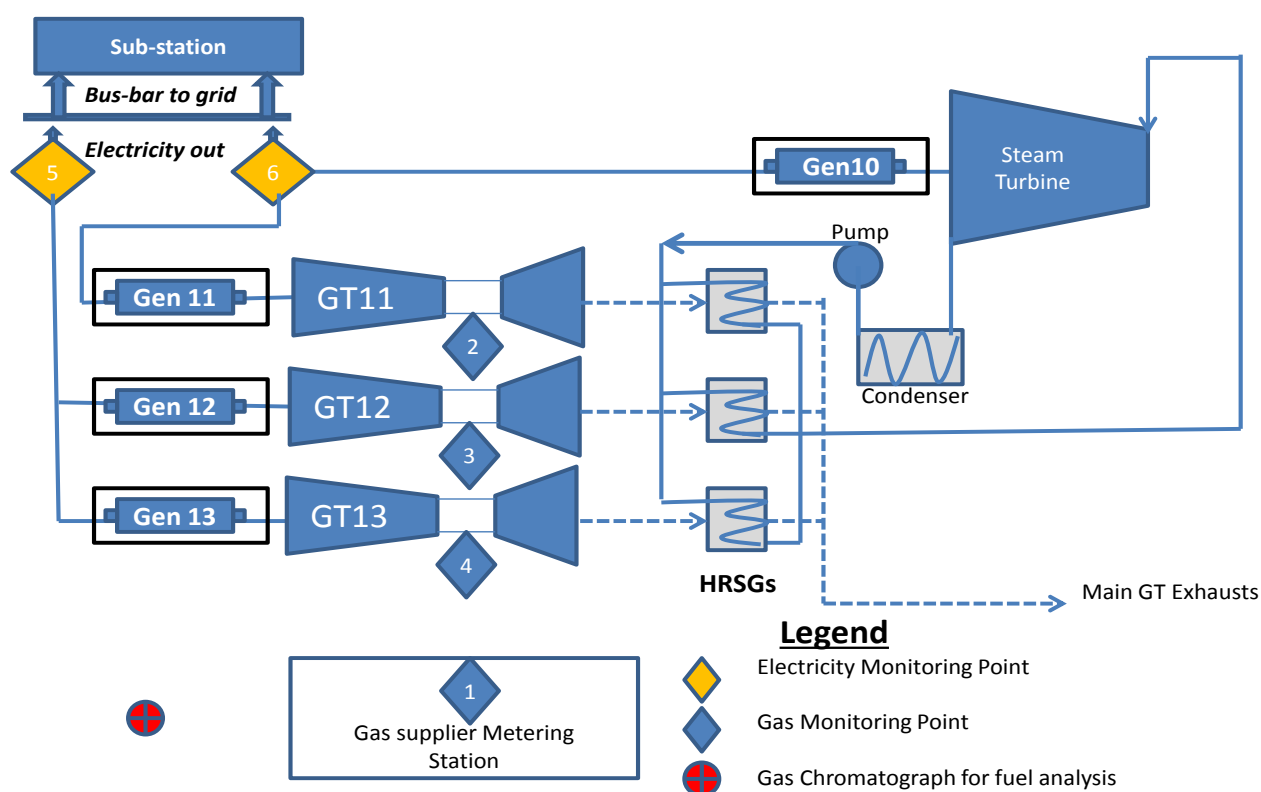
SECTION B. Implementation of project activity

B.1. Description of implemented registered project activity

Description of the installed technology, technical processes and equipment:

The combustor is fired with natural gas and produces hot, high pressure, low NO_x gases, which expand in the gas turbine. The gas turbine drives the generators, the thermal energy contained in the high temperature exit gases of the gas turbine is recovered in the heat recovery steam generator (HRSG), which is designed to maximize the heat recovery of gases and allows a minimum stack temperature of the exhaust gases. The steam generated from the HRSG is introduced in the steam turbine and then expands to drive the generator.

Figure 1: Afam VI Facility Schematic Design also showing the monitoring points



Implementation Status of the Project Activity

The CDM project activity was fully commissioned into the combined cycle mode on 04/07/2010 and the CDM monitoring commenced on 01/11/2012 (See Table 2 for a more comprehensive overview of relevant dates since CDM registration). All operations are at one single site and within an integrated physical facility.

Operational status during the monitoring period in consideration

The electrical facility as commissioned has worked quite well during the monitoring period, and no major operational disruptions were caused by events within the IPP facility itself. However due to constraints and failures in the Nigerian grid the facility has had numerous occasions been required to reduce its supply to the grid (see Table 3 in the PDD for a discussion of the status of the Nigerian grid). There have also been some limited reductions in gas supply that has affected operations. Table 3 below shows the events that occurred during the monitoring period that affected emissions.

Table 3: Events during the Monitoring Period

No	Event #	Date / Time event started	Date / Time event finished (First GT synchronized)	Event duration (hrs)	Reason
1	ER 109/2013	09/11/13 - 6:50	15/11/13 - 14:53	152.03	Afam VI plant shutdown due to Statutory Inspection (Pressure vessels and Safety relief valves).
2	ER 110/2013	15/11/13 - 14:53	15/11/13 - 21:33	6.67	Grid failure
3	ER 111/2013	24/11/13 - 17:09	24/11/13 - 21:23	4.23	Grid failure
4	ER 112/2013	25/11/13 - 1:44	25/11/13 - 10:31	8.78	Grid failure
5	ER 114/2013	29/11/13 - 12:20	29/11/13 - 16:23	4.05	Grid failure
6	ER 119/2013	02/12/13 - 12:54	02/12/13 - 14:20	1.43	Grid failure
7	ER 123/2013	21/12/13 - 8:05	21/12/13 - 12:29	4.60	AFAM VI off the grid due to TCN planned outage work on Alaoji/Onitsha T4A transmission line
8	ER 124/2013	29/12/13 - 13:41	29/12/13 - 14:39	0.97	Grid failure
9	ER 125/2013	31/12/13 - 14:43	31/12/13 - 16:24	1.68	Grid failure
10	ER 07/2014	28/01/14 - 6:17	28/01/14 - 8:54	2.62	Grid failure
11	ER 08/2014	29/01/14 - 18:24	29/01/14 - 20:33	2.15	Grid failure
12	ER 09/2014	30/01/14 - 0:24	30/01/14 - 3:09	2.75	Grid failure
13	ER 10/2014	30/01/14 - 7:37	30/01/14 - 10:08	2.52	Grid failure
14	ER 16/2014	22/02/14 - 14:46	22/02/14 - 17:53	3.12	Grid failure
15	ER 17/2014	27/02/14 - 18:57	27/02/14 - 20:14	1.28	Grid failure
16	ER 20/2014	01/03/14 - 23:48	02/03/14 - 3:11	3.38	Grid failure
17	ER 29/2014	02/04/14 - 16:29	03/04/14 - 13:13	20.73	Okoloma Gas Plant (OGP) gas supply low pressure
18	ER 30/2014	06/04/14 - 12:45	07/04/14 - 8:12	19.45	OGP gas supply low pressure
19	ER 31/2015	09/04/14 - 11:43	09/04/14 - 13:40	1.95	Grid failure
20	ER 32/2015	09/04/14 - 16:06	09/04/14 - 19:48	3.70	Grid failure
21	ER 36/2015	13/04/14 - 8:33	13/04/14 - 17:30	8.95	Grid failure

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22	ER 42/2015	02/05/14 - 14:40	02/05/14 - 23:38	8.97	OGP gas supply low pressure
23	ER 44/2015	03/05/14 - 10:46	03/05/14 - 21:02	10.27	National Control Center (NCC) request Afam to shut down to enable work on Afam-Alaoji lines
24	ER 47/2015	27/05/14 - 6:45	27/05/14 - 8:00	1.25	Grid failure
25	ER 48/2015	29/05/14 - 18.16	29/05/14 - 21.15	2.98	Grid failure
26	ER 51/2015	06/06/14 - 12:30	06/06/14 - 13:39	1.15	Grid failure
27	ER 55/2015	19/06/14 - 14:27	19/06/14 - 20:30	6.05	Grid failure
28	ER 56/2015	19/06/14 - 20:30	20/06/14 - 16:30	20.10	Afam VI shut down due to Main Fire Protection System Alarm Panel faulty
29	ER 57/2015	22/06/14 - 5:40	22/06/14 - 8:27	2.78	Grid failure
30	ER 60/2015	30/06/14 - 10:47	30/06/14 - 12:45	1.97	Grid failure
31	ER 65/2015	17/07/14 - 0:59	17/07/14 - 2.00	1.02	Grid failure
32	ER 67/2015	18/07/14 - 19:53	18/07/14 - 23:19	3.43	Grid failure
33	ER 73/2015	21/07/14 - 11.04	21/07/14 - 23.38	12.57	Grid failure
34	ER 75/2014	22/07/14 - 12:23	22/07/14 - 17:53	5.50	Afam VI is out of the grid as requested by NCC due to Onitsha/Benin 330KV line maintenance
35	ER 76/2014	23/07/14 - 11:16	05/08/14 - 13:49	314.55	OGP planned shutdown
36	ER 83/2014	09/08/14 - 14:37	09/08/14 - 16:05	1.47	Grid failure
37	ER 85/2014	11/08/14 - 9:57	11/08/14 - 19:47	9.83	Grid failure
38	ER 87/2014	23/08/14 - 12:27	23/08/14 - 13:26	0.98	Grid failure
39	ER 88/2014	25/08/14 - 11:33	25/08/14 - 20:10	8.62	OGP gas supply low pressure
40	ER 89/2014	28/08/14 - 12:20	28/08/14 - 16:05	3.75	Grid failure
41	ER 97/2014	13/09/14 - 10:01	13/09/14 - 19:02	9.07	Grid outage for maintenance work at Alaoji line
42	ER 98/2014	13/09/14 - 19:07	13/09/14 - 20:22	1.25	GT11 tripped on Gen Protection PLST (Due to grid voltage disturbance)
43	ER 96/2014	18/09/14 - 14:14	18/09/14 - 15:52	1.63	OGP gas supply restriction
44	ER 99/2014	19/09/14 - 14:10	21/09/14 - 15:30	49.33	OGP gas supply restriction
45	ER 100/2014	23/09/14 - 6:14	23/09/14 - 8:01	1.78	Grid failure

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46	ER 109/2014	03/10/14 - 13:20	03/10/14 - 15:35	2.25	Grid failure
47	ER 117/2014	16/10/14 - 13:37	16/10/14 - 16:25	2.80	Grid failure
48	ER 133/2014	08/11/14 - 11:03	08/11/14 - 18:40	7.62	NCC had planned maintenance work on Alaoji/Afam line on T4A 330KV
49	ER 131/2014	13/11/14 - 22:50	15/11/14 - 22:07	47.28	OGP gas supply restriction
50	ER 135/2014	21/11/14 - 13:30	21/11/14 - 14:45	1.25	Grid failures (2)
51		21/11/14 - 13:30	21/11/14 - 18:10	2.43	
52	ER 140/2014	08/12/14 - 12:03	08/12/14 - 17:27	5.40	NCC informed maintenance on Alaoji / Ikot Ekpene line
53	ER 141/2014	10/12/14 - 8:32	10/12/14 - 18:06	9.57	NCC informed maintenance on Alaoji / Ikot Ekpene line
54	ER 143/2014	11/12/14 -10:00	11/12/14 -18:10	8.17	NCC informed maintenance on Alaoji / Ikot Ekpene line
55	ER 144/2014	12/12/14 -10:22	12/12/14 -19:59	7.62	NCC informed maintenance on Alaoji / Ikot Ekpene line
56	ER 145/2014	13/12/14 - 8:12	13/12/14 - 19:43	11.52	NCC informed maintenance on Alaoji / Ikot Ekpene line
57	ER 146/2014	14/12/14 - 9:03	14/12/14 - 18:48	9.75	NCC informed maintenance on Alaoji / Ikot Ekpene line
58	ER 131/2014	14/12/14 - 22:18	14/12/14 - 23:26	1.13	OGP gas supply restriction and low gas pressure
59	ER 147/2014	15/12/14 - 9:11	15/12/14 - 18:37	9.43	NCC informed maintenance on Alaoji / Ikot Ekpene line
60	ER 04/2015	06/01/15 - 6:17	06/01/15 - 21:11	14.90	OGP gas supply low pressure
61	ER 06/2015	11/01/15 - 14:25	11/01/15 - 19:06	4.68	Grid failure
62	ER 11/2015	27/01/15 - 11:59	27/01/15 - 13:30	1.31	NCC req Afam VI shut down due to grid maintenance
63	ER 13/2015	27/01/15 - 13:50	27/01/15 - 19:38	5.80	Grid failure
64	ER 14/2015	27/01/15 - 19:44	27/01/15 - 22:24	2.67	OGP gas supply restriction
65	ER 15/2015	28/01/15 - 10:05	28/01/15 - 19:08	9.05	NCC informed maintenance on Alaoji / Ikot Ekpene line
66	ER 16/2015	29/01/15 - 9:24	29/01/15 - 20:46	11.37	NCC informed maintenance on Alaoji / Ikot Ekpene line
67	ER 17/2015	30/01/15 - 9:23	30/01/15 - 20:06	10.72	NCC informed maintenance on Alaoji / Ikot Ekpene line
68	ER 18/2015	31/01/15 - 15:05	31/01/15 - 16:32	1.45	Grid failure

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69	ER 21/2015	01/02/15 - 7:11	01/02/15 - 11:58	4.78	OGP fire alarm activated
70	ER 22/2015	01/02/15 - 12:34	01/02/15 - 16:29	3.92	Afam VI NGS reducing valve line 2 problem
71	ER 25/2015	02/02/15 - 12:06	02/02/15 - 14:02	1.93	Grid failure
72	ER 27/2015	03/02/15 - 21.03	03/02/15 - 22:56	1.88	Grid failure
73	ER 26/2015	06/02/15 - 13:56	06/02/15 - 16:11	2.28	Grid failure
74	ER 38/2015	11/03/15 - 17:33	11/03/15 - 22:05	4.53	Grid failure
75	ER 39/2015	14/03/15 - 10:40	14/03/15 - 11:39	0.98	Grid failure
76	ER 40/2015	17/03/15 - 16:09	17/03/15 - 17:27	1.30	Grid failure
77	ER 44/2015	23/03/15 - 15:27	23/03/15 - 18:34	3.12	TCN requested Afam VI to de-load to off- grid due to emergency at Alaoji
78	ER 58/2015	07/05/15 - 12:58	07/05/15 - 17:23	5.42	Grid failure
79	ER 59/2015	07/05/15 - 17:23	08/05/15 - 11:16	17.88	Afam VI NGS reducing line 2 PCV air regulator problem.
80	ER 63/2015	10/05/15 - 15:59	10/05/15 - 18:27	2.47	Grid failure
81	ER 69/2015	15/05/15 - 11:29	15/05/15 - 17:05	5.36	Grid failure
82	ER 74/2015	18/05/15 - 19:45	18/05/15 - 22:40	2.92	Grid failure
83	ER 79/2015	24/05/15 - 16:04	26/05/15 - 2:29	34.42	Grid failure
84	ER 81/2015	26/05/15 - 10:21	26/05/15 - 13:48	3.45	Grid failure
85	ER 90/2015	04/06/15 - 9:51	04/06/15 - 15:23	5.53	OGP gas supply low pressure
86	ER 92/2015	06/06/15 - 6:08	06/06/15 - 11:28	5.33	Grid failure
87	ER 94/2015	07/06/15 - 3:08	07/06/15 - 14:48	11.67	Grid failure
88	ER 97/2015	12/06/15 - 3:12	12/06/15 - 16:01	12.82	Grid failure
89	ER 104/2015	23/06/15 - 12.39	23/06/15 - 14:28	1.49	Grid failure
90	ER 110/2015	01/07/15 - 13:53	01/07/15 - 16:52	2.98	Grid failure
91	ER 115/2015	08/07/15 - 12:56	08/07/15 - 13:59	1.05	Grid failure
92	ER 124/2015	25/07/15 - 16:37	25/07/15 - 18:18	1.68	GT12/GT13 tripped on Gen. Diff. Prot. as a result of HVCB (00ADB60GS200/300 & 00ADA60GS200 closed by TCN

93	ER 131/2015	04/08/15 - 15:04	04/08/15 - 16:58	1.90	Grid failure
94	ER 134/2015	21/08/15 - 16:47	21/08/15 - 21:44	4.95	OGP gas supply low pressure
95	ER 145/2015	11/09/15 - 15:26 & 11/09/15 - 16:30	11/09/15 - 16:21 & 11/09/15 - 17:39	2.07	Grid failure
96	ER 150/2015	21/09/15 - 17:49	21/09/15 - 18:48	0.98	Grid failure
97	ER 151/2015	22/09/15 - 14:16	22/09/15 - 15:30	1.23	Grid failure
98	ER 153/2015	26/09/15 - 13:10	26/09/15 - 18:55	5.75	NCC maintenance work on T4A circuit line cut at Onitsha/Alaoji end.
99	ER 158/2015	13/10/15 - 0:33	13/10/15 - 1:42	1.15	Grid failure
100	ER 159/2015	20/10/15 - 18:44	20/10/15 - 23:14	4.50	Grid failure
101	ER 167/2015	01/11/15 - 12:09	01/11/15 - 15:14	3.08	NCC work on T4A circuit line at Onitsha end.
102	ER 168/2015	04/11/15 - 8:33	05/11/15 - 0:14	15.68	OGP shut down for ESD system test and maintenance combined with Afam ESD system test.
103	ER 169/2015	18/11/15 - 13:32	18/11/15 - 17:09	3.62	Grid failure
104	ER 170/2015	23/11/15 - 15:33	23/11/15 - 17:20	1.78	BBA - BBB change over failed
105	ER 179/2015	01/12/15 - 10:33	01/12/15 - 11:10	0.37	Grid failure
106	ER 180/2015	04/12/15 - 1:44	04/12/15 - 3:11	1.45	OGP gas supply low pressure
107	ER 171/2015	13/12/15 - 9:49	31/12/15 - 24:00	446.18	OGP gas supply restriction

Please note that National Control Centre (NCC) is a facility located at Oshogbo, Osun state and owned by the Transmission Company of Nigeria (TCN).

B.2. Post-registration changes

B.2.1. Temporary deviations from registered monitoring plan, applied methodology or applied standardized baseline

No temporary deviation from the registered monitoring plan or applied methodology.

B.2.2. Corrections

No corrections to project information or parameters fixed at validation have been submitted with this monitoring report

B.2.3. Changes to start date of crediting period

No changes to the start date of the crediting period.

B.2.4. Inclusion of a monitoring plan to the registered PDD that was not included at registration

No inclusion of a monitoring plan to the registered PDD that was not included at registration.

B.2.5. Permanent changes from registered monitoring plan, applied methodology or applied standardized baseline

No changes are requested.

B.2.6. Changes to project design of registered project activity

No changes to project design of registered project activity have been approved during this monitoring period.

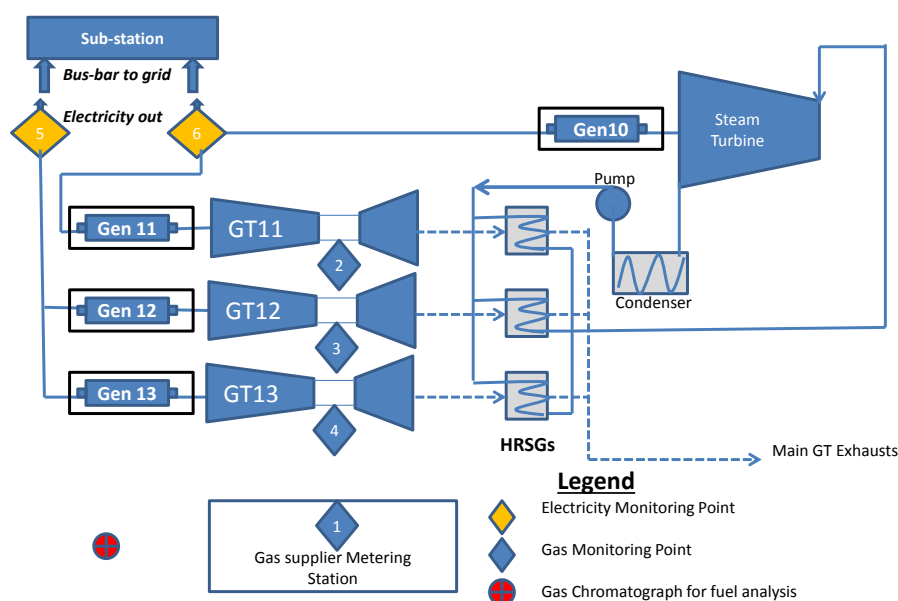
B.2.7. Types of changes specific to afforestation or reforestation project activity

Not Applicable

SECTION C. Description of monitoring system

The monitoring plan applied for the CDM project activity is as described in Section B.7 and Annex 4 of the registered PDD, as available on the UNFCCC website. As part of the CDM monitoring preparations, the monitoring procedures presented in the PDD have been developed in more detail to reflect the physical infrastructure installed – however, all the monitoring points' variables are similar to that in the PDD. Monitoring procedures are maintained in the SPDC Plant Procedures manual which is updated periodically and maintained at the site.

Schematic of the CDM monitoring points



Parameters monitored:

The monitoring methodology requires the following parameters to be monitored during the crediting period:

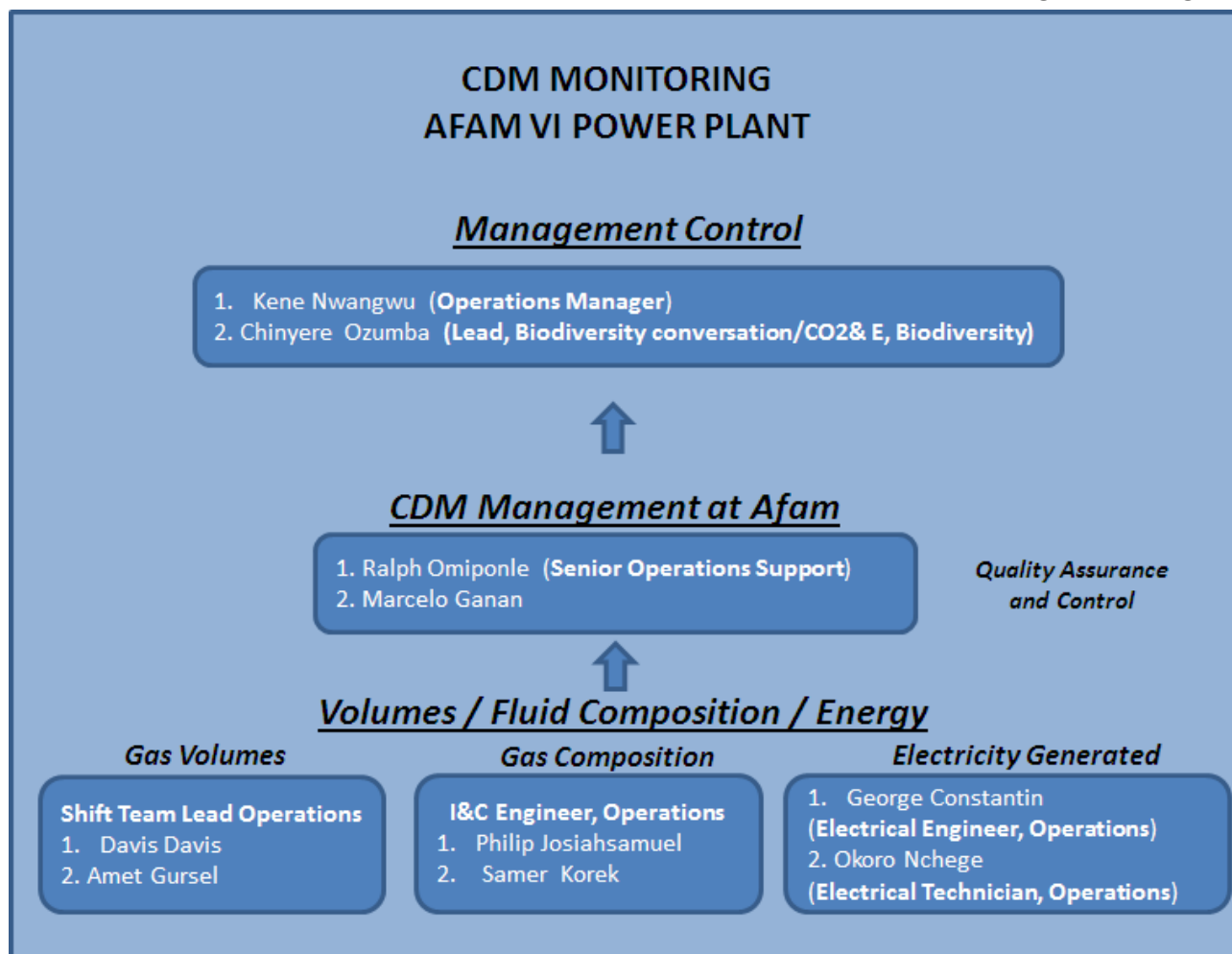
For project emissions:

1. Annual fuel(s) consumption in project activity;
2. Net Calorific Value(s) of the fuel used in the project activity;
3. Fuel emission factors for fuel used in the project activity.

Baseline emissions will be monitored as per the “Tool to calculate emission factor for an electricity system”, as applicable. Therefore, according to Option 3 used in the choice of baseline emissions factor, EF_{BL} , parameters $EG_{PJ,y}$ is monitored while $COEF_{BL}$ is fixed ex-ante.

Organizational structure and CDM specific responsibilities

The figure below illustrates the key roles and responsibilities during the monitoring period in consideration.



The key roles and CDM related responsibilities of staff at the Afam VI power plant are the following:

- a) Collection of data, QA, reporting and storage of all primary data
- b) Periodic maintenance, inspection and calibration of all measurement equipment, including control of meter accuracy and software configurations (e.g. flow computers)

In essence, the key CDM roles of each of three organizational units are:

- **Gas Volumes:** Responsible for all primary monitoring data related to volumes and assuring that all equipment is maintained within the criteria in the PDD monitoring plan and the procedure's manual.
- **Gas Composition:** Ensuring gas compositions comply with the standards required by the plant and meeting the CDM monitoring requirements. Also ensuring that the Gas chromatograph is calibrated at the required frequency and standards
- **Electricity Generated:** Responsible for all primary monitoring data related to electricity generation and assuring that all equipment is maintained within the criteria in the PDD monitoring plan and the procedure's manual.

Storage of primary data related to the CDM monitoring:

All data will be recorded in a purpose-built MS Excel spreadsheet. Data will be stored on SPDCs' computer server and backed up regularly. This is achieved periodically in a secure and reliable storage for up to two years after the end of the crediting period. Hard copies are kept for a one year period or until electronic copies are available. For data assurance and quality control of primary data, procedures and all relevant CDM information are maintained in a specified site in the

gas plant administration building in the office of the CDM Focal Point. The information is kept in structured folders and includes: procedures, manuals and standards for the meters, certifications, and other relevant information. This serves as the documental control point.

SECTION D. Data and parameters

D.1. Data and parameters fixed ex ante or at renewal of crediting period

Data/parameter:	OXID_f
Unit	-
Description	Oxidation factor of natural gas used in the calculation of project emission
Source of data	2006 IPCC Guidelines for National Greenhouse Gas Inventories default factor for stationary combustion sources.
Value(s) applied)	1
Choice of data or measurement methods and procedures	
Purpose of data	Used for calculating CO ₂ emission coefficient for PE
Additional comments	None

Data/parameter:	EF_{BL,CO2,y}
Unit	tCO ₂ /MWh
Description	Baseline CO ₂ emissions factor
Source of data	Calculated based on the fuel coefficient and the energy efficiency of the technology, as estimated in the baseline scenario analysis.
Value(s) applied)	0.511 (see section B.6.1 of the registered PDD)
Choice of data or measurement methods and procedures	Calculated data based on the "Tool to calculate the emission factor for an electricity system"
Purpose of data	Calculation of baseline emissions.
Additional comments	None

D.2. Data and parameters monitored

Data/parameter:	FC_{f,1,y}
Unit	m ³
Description	Annual quantity of fuel (natural gas) consumed in project activity
Measured/calculated/default	Continuous metering of gas supply both at supplier (Okoloma gas plant) and project end for cross verification and measured in standard cubic meters (m ³)
Source of data	Fuel (natural gas) flow meter reading at Afam plan gas reception facilities.
Value(s) of monitored parameter	1,465,085,452

Monitoring equipment	<table><tr><th>Stream I-D</th><th>RF</th></tr><tr><td>Data/Parameter</td><td>FC_{f,1,y}</td></tr><tr><td>Make</td><td>Elster- Instromet</td></tr><tr><td>Type</td><td>2000</td></tr><tr><td>Serial No.</td><td>(FM 11) - 0B73 (3433) (FM 12) - 444C (3432)</td></tr><tr><td>Accuracy Class</td><td>Accuracy for Digital measurement - Under Normal Condition 0.1% - Under Temp. Range (-10C to +30C) 0.2% Accuracy for Analogue Measurement - Maximum error 0.15% </td></tr><tr><td>Calibration Frequency</td><td>Annually</td></tr></table>	Stream I-D	RF	Data/Parameter	FC _{f,1,y}	Make	Elster- Instromet	Type	2000	Serial No.	(FM 11) - 0B73 (3433) (FM 12) - 444C (3432)	Accuracy Class	Accuracy for Digital measurement - Under Normal Condition 0.1% - Under Temp. Range (-10C to +30C) 0.2% Accuracy for Analogue Measurement - Maximum error 0.15%	Calibration Frequency	Annually
	Stream I-D	RF													
	Data/Parameter	FC _{f,1,y}													
	Make	Elster- Instromet													
	Type	2000													
	Serial No.	(FM 11) - 0B73 (3433) (FM 12) - 444C (3432)													
	Accuracy Class	Accuracy for Digital measurement - Under Normal Condition 0.1% - Under Temp. Range (-10C to +30C) 0.2% Accuracy for Analogue Measurement - Maximum error 0.15%													
Calibration Frequency	Annually														
Measuring/reading/recording frequency:	Continuous														
Calculation method (if applicable):	Not applicable														
QA/QC procedures:	Natural gas supply metering (Elster Instromet 2000) to the project will be subject to regular (in accordance with stipulation of the meter supplier) maintenance and testing to ensure accuracy. Calibration is to be carried out annually (the manufacturers' specification for calibration is 12 years). During this monitoring period, the calibration for this flow meter was delayed hence, in line with VVS (version 09) pp 395, the value obtained (1,465,085,452m³) is adjusted by 2% to 1, 494,387,161m³. This meter reading is compared to the sum of the three gas meters to the turbines (FC_{f,2,y}, FC_{f,3,y} FC_{f,4,y})														
Purpose of data:	For calculating project emission														
Additional comments:	In the QA/QC it was verified that the summation of the three individual flow meters on the gas turbines (FC_{f,2,y}, FC_{f,3,y} FC_{f,4,y}) was slightly lower than the FC_{f,1,y} ; the FC_{f,1,y} reading was used in calculation of project emissions. This is in keeping with the CDM conservative principal – i.e. highest level of project emissions. It should be noted that while the accuracy class is ±0.2%, the value obtained has been adjusted by 2% for conservativeness.														

Data/parameter:	FC _{f,2,y}
Unit	m ³
Description	Annual quantity of fuel (natural gas) consumed in gas turbine #11
Measured/calculated/default	Daily meter reading
Source of data	Fuel (natural gas) flow meter reading at turbine #11 inlet (SM R1-X-K G1600 Elster Instromet meter located at point 2 in figure A4.1 of the PDD)
Value(s) of monitored parameter	508,384,975m ³

Monitoring equipment	<table border="1"> <thead> <tr> <th>Stream I-D</th><th>RF_1</th></tr> </thead> <tbody> <tr> <td>Data/Parameter</td><td>FC_{f,2,y}</td></tr> <tr> <td>Make</td><td>Elster Instromet</td></tr> <tr> <td>Type</td><td>SM-R1-X-K G1600</td></tr> <tr> <td>Serial No.</td><td>10506156-2006</td></tr> <tr> <td>Accuracy Class</td><td>±2%</td></tr> <tr> <td>Calibration Frequency</td><td>Annually</td></tr> </tbody> </table>	Stream I-D	RF_1	Data/Parameter	FC _{f,2,y}	Make	Elster Instromet	Type	SM-R1-X-K G1600	Serial No.	10506156-2006	Accuracy Class	±2%	Calibration Frequency	Annually
Stream I-D	RF_1														
Data/Parameter	FC _{f,2,y}														
Make	Elster Instromet														
Type	SM-R1-X-K G1600														
Serial No.	10506156-2006														
Accuracy Class	±2%														
Calibration Frequency	Annually														
Measuring/reading/recording frequency:	Daily														
Calculation method (if applicable):	Not applicable														
QA/QC procedures:	Used to corroborate gas consumption data collected at point 1. Calibration of the meter is to be carried out annually (manufacturers' specification is 5 years). During this monitoring period, the calibration for this flow meter was delayed hence, in line with VVS (version 09) pp 395, the value obtained (508,384,975m³) is adjusted by 2% to 518,552,674m³.														
Purpose of data:	For calculating project emission.														
Additional comments:	Used in calculation of project emissions in this MR. It should be noted that while the accuracy class is ±0.2%, the value obtained has been adjusted by 2% for conservativeness.														

Data/parameter:	FC _{f,3,y}														
Unit	m ³														
Description	Annual quantity of fuel (natural gas) consumed in gas turbine #12														
Measured/calculated/default	Daily meter reading														
Source of data	Fuel (natural gas) flow meter reading at turbine #12 inlet (SM R1-X-K G1600 Elster Instromet meter located at point 3 in figure A4.1)														
Value(s) of monitored parameter	464,732,375m ³														
Monitoring equipment	<table border="1"> <thead> <tr> <th>Stream I-D</th><th>RF_2</th></tr> </thead> <tbody> <tr> <td>Data/Parameter</td><td>FC_{f,3,y}</td></tr> <tr> <td>Make</td><td>Elster Instromet</td></tr> <tr> <td>Type</td><td>SM-R1-X-K G1600</td></tr> <tr> <td>Serial No.</td><td>10506156-2006 (Old) (10509681-2007 (Installed 03/2014))</td></tr> <tr> <td>Accuracy Class</td><td>±2%</td></tr> <tr> <td>Calibration Frequency</td><td>Annually</td></tr> </tbody> </table>	Stream I-D	RF_2	Data/Parameter	FC _{f,3,y}	Make	Elster Instromet	Type	SM-R1-X-K G1600	Serial No.	10506156-2006 (Old) (10509681-2007 (Installed 03/2014))	Accuracy Class	±2%	Calibration Frequency	Annually
Stream I-D	RF_2														
Data/Parameter	FC _{f,3,y}														
Make	Elster Instromet														
Type	SM-R1-X-K G1600														
Serial No.	10506156-2006 (Old) (10509681-2007 (Installed 03/2014))														
Accuracy Class	±2%														
Calibration Frequency	Annually														
Measuring/reading/recording frequency:	Daily														
Calculation method (if applicable):	Not applicable														
QA/QC procedures:	Used to corroborate gas consumption data collected at point 1. Calibration is to be carried out annually (manufacturers' specification is 5 years). During this monitoring period, the calibration for this flow meter was delayed hence, in line with VVS (version 09) pp 395, the value obtained (464,732,375m³) is adjusted by 2% to 474,027,022m³.														
Purpose of data:	For calculating project emissions.														

Additional comments:	Used in calculation of project emissions in this MR. It should be noted that while the accuracy class is $\pm 0.2\%$, the value obtained has been adjusted by 2% for conservativeness.
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Data/parameter:	FC_{f,4,y}														
Unit	m ³														
Description	Annually quantity of fuel (natural gas) consumed in gas turbine #13														
Measured/calculated/default	Daily meter reading														
Source of data	Fuel (natural gas) flow meter reading at turbine #13 inlet (SM R1-X-K G1600 Elster Instromet meter located at point4 in figure A4.1)														
Value(s) of monitored parameter	485,032,240m ³														
Monitoring equipment	<table border="1"> <thead> <tr> <th>Stream I-D</th><th>RF_3</th></tr> </thead> <tbody> <tr> <td>Data/Parameter</td><td>FC_{f,4,y}</td></tr> <tr> <td>Make</td><td>Elster Instromet</td></tr> <tr> <td>Type</td><td>SM-R1-X-K G1600</td></tr> <tr> <td>Serial No.</td><td>10506157-2006</td></tr> <tr> <td>Accuracy Class</td><td>$\pm 2\%$</td></tr> <tr> <td>Calibration Frequency</td><td>Annually</td></tr> </tbody> </table>	Stream I-D	RF_3	Data/Parameter	FC _{f,4,y}	Make	Elster Instromet	Type	SM-R1-X-K G1600	Serial No.	10506157-2006	Accuracy Class	$\pm 2\%$	Calibration Frequency	Annually
Stream I-D	RF_3														
Data/Parameter	FC _{f,4,y}														
Make	Elster Instromet														
Type	SM-R1-X-K G1600														
Serial No.	10506157-2006														
Accuracy Class	$\pm 2\%$														
Calibration Frequency	Annually														
Measuring/reading/recording frequency:	Daily														
Calculation method (if applicable):	Not applicable														
QA/QC procedures:	Used to corroborate gas consumption data collected at point 1. Calibration is to be carried out annually (manufacturers' specification is 5 years). During this monitoring period, the calibration for this flow meter was delayed hence, in line with VVS (version 09) pp 395, the value obtained (485,032,240m ³) is adjusted by 2% to 494,732,885m ³ .														
Purpose of data:	For calculating project emissions.														
Additional comments:	Used in calculation of project emissions in this MR. It should be noted that while the accuracy class is $\pm 0.2\%$, the value obtained has been adjusted by 2% for conservativeness.														

Data/parameter:	NCV_{f,y}
Unit	GJ/m ³
Description	The net calorific value (energy content) per volume unit of natural gas used in the calculation of project emissions.
Measured/calculated/default	Gas samples collected using SPDC standard gas sampling protocol and analysed using standard gas chromatography techniques in on-site laboratory
Source of data	Based on a fortnightly sampling at the Afam gas custody point
Value(s) of monitored parameter	0.0443

Monitoring equipment	Stream I-D	RC
	Meter/Equipment	Gas Chromatograph
	Make	Daniel Analyzer
	Model	500
	Serial Number	9005161
	Accuracy Class	±0.25BTU/1000 (for ambient C6+ analysis)
	Calibration Frequency	At least quarterly
Measuring/reading/recording frequency:	At least fortnightly	
Calculation method (if applicable):	The value applied is the average of all the records obtained during the 262 months monitoring period.	
QA/QC procedures:	The calorific value of the gas will be recorded by the project participant and cross checked against measurements made, and provided, by the gas supplier. The calibration of the Gas Chromatograph is fortnightly as per the PDD. Some of the months are delayed during the monitoring period. In line with the VVS (version 09) pp 395, the value obtained (0.0443GJ/m ³) was adjusted by 2% to 0.0449GJ/m ³ .	
Purpose of data:	For calculating CO ₂ emission coefficient for project emission.	
Additional comments:	The data is recorded daily. It should be noted that while the accuracy class is ±0.25BTU/1000, the value obtained has been adjusted by 2% for conservativeness.	

Data/parameter:	EF _{CO2,F,y}	
Unit	tCO ₂ /GJ	
Description	CO2 emission factor per unit of energy of natural gas used in the calculation of project emission	
Measured/calculated/default	Gas samples collected using SPDC standard gas sampling protocol and analysed using standard gas chromatograph techniques in on-site laboratory	
Source of data	At least a fortnightly sampling at the Afam gas custody point	
Value(s) of monitored parameter	0.0381 (This is based on the average of monthly records during the 12 months monitoring period)	
Monitoring equipment		
	Stream I-D	RC
	Meter/Equipment	Gas Chromatograph
	Make	Daniel Analyzer
	Model	500
	Serial Number	9005161
	Accuracy Class	±0.25 BTU/1000 (for ambient C6+ analysis)
	Calibration Frequency	At least quarterly
Measuring/reading/recording frequency:	At least fortnightly	
Calculation method (if applicable):	The value applied is the average of all the records obtained during the 12 months monitoring period.	
QA/QC procedures:	The CO2 content of the gas will be recorded by the project participant and cross-checked against measurements made, and provided, by the gas supplier. The calibration of the Gas Chromatograph is fortnightly as per the PDD. Some months are delayed during the monitoring period. In line with the VVS (version 09) pp 395, the value obtained (0.0381tCO2/GJ) was adjusted by 2% to 0.0386tCO2/GJ.	
Purpose of data:	For calculating CO2 emission coefficient for project emission.	

Additional comments:	The data is recorded daily It should be noted that while the accuracy class is $\pm 0.25\text{BTU}/1000$, the value obtained has been adjusted by 2% for conservativeness.
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Data/parameter:	EG_{PJ,5,y}														
Unit	MWh														
Description	Electricity produced by two gas turbines.														
Measured/calculated/default	Continuous metering of electricity supplied by the gas turbines to the bus-bar of the Afam plant.														
Source of data	Electricity meters installed in the plant power export to bus-bar (meter type EDM1 MK6E with accuracy class 0.2S. IEC62052-11/62053-22 and meter type EDM1 MK6E with accuracy class 0.2S/0.55. IEC62052-11/62053-22) for the two gas turbine.														
Value(s) of monitored parameter	5,578,964														
Monitoring equipment	<table border="1"> <thead> <tr> <th>Stream I-D</th><th>EG 5</th></tr> </thead> <tbody> <tr> <td>Data/Parameter</td><td>EG_{PJ,5,y}</td></tr> <tr> <td>Meter</td><td>EM1 ADA</td></tr> <tr> <td>Type</td><td>EDM1 MK6E</td></tr> <tr> <td>Serial No.</td><td>206657326</td></tr> <tr> <td>Accuracy Class</td><td>0.2S</td></tr> <tr> <td>Calibration Frequency</td><td>Bi-annually (at least 180 days)</td></tr> </tbody> </table>	Stream I-D	EG 5	Data/Parameter	EG _{PJ,5,y}	Meter	EM1 ADA	Type	EDM1 MK6E	Serial No.	206657326	Accuracy Class	0.2S	Calibration Frequency	Bi-annually (at least 180 days)
Stream I-D	EG 5														
Data/Parameter	EG _{PJ,5,y}														
Meter	EM1 ADA														
Type	EDM1 MK6E														
Serial No.	206657326														
Accuracy Class	0.2S														
Calibration Frequency	Bi-annually (at least 180 days)														
Measuring/reading/recording frequency:	Continuous metering of electricity supplied by the gas turbines to the bus-bar of the Afam plant.														
Calculation method (if applicable):	Not applicable														
QA/QC procedures:	Metered export of electricity to be checked against data on power received by the grid operator (PHCN/TCN) at the Afam plant-grid interface points. Accuracy of the meters are to be tested every 180 days as outlined in section 7.3 of the PPA and the calibration of meters needs to be undertaken if electrical energy measured by the system differs by over half a percent (0.5%) from any back-up system. However, during this monitoring period, the calibration was delayed hence the value obtained (5,578,964MWh) was adjusted by 2% to 5,467,385MWh in line with VVS (version 09) pp 395.														
Purpose of data:	For calculating baseline emission.														
Additional comments:	It should be noted that while the accuracy class is 0.2S, the value obtained has been adjusted by 2% for conservativeness.														

Data/parameter:	EG_{PJ,6,y}
Unit	MWh
Description	Electricity produced by a one gas and one steam turbine.
Measured/calculated/default	Continuous metering of electricity supplied by the gas and steam turbines to the bus-bar of the Afam plant.
Source of data	Electricity meters installed in the plant power export to bus-bar (meter type EDM1 MK6E with accuracy class 0.2S. IEC62052-11/62053-22 and meter type EDM1 MK6E with accuracy class 0.2S/0.55. IEC62052-11/62053-22) for both the gas and steam turbine.
Value(s) of monitored parameter	1,393,008

Monitoring equipment		
	Stream I-D	EG_6
	Data/Parameter	EG _{PJ,6,y}
	Meter	EM2 ADB
	Type	EDMI MK6E
	Serial Number	208002801
	Accuracy Class	0.2S
	Calibration Frequency	Bi-annually (at least 180 days)
Measuring/reading/recording frequency:	Continuous metering of electricity supplied by the gas and steam turbine to the bus-bar of the Afam plant.	
Calculation method (if applicable):	Not applicable	
QA/QC procedures:	Metered export of electricity to be checked against data on power received by the grid operator (PHCN/TCN) at the Afam plant-grid interface points. Accuracy of the meters are to be tested every 180 days as outlined in section 7.3 of the PPA and the calibration of meters needs to be undertaken if electrical energy measured by the system differs by over half a percent (0.5%) from any back-up system. However, during this monitoring period, the calibration was delayed hence the value obtained (1,393,008MWh) was adjusted by 2% to 1,365,148MWh in line with VVS (version 09) pp 395.	
Purpose of data:	For calculating baseline emission.	
Additional comments:	It should be noted that while the accuracy class is 0.2S, the value obtained has been adjusted by 2% for conservativeness.	

D.3. Implementation of sampling plan

Not applicable

SECTION E. Calculation of emission reductions or GHG removals by sinks

E.1. Calculation of baseline emissions or baseline net GHG removals by sinks

Baseline emissions are calculated in accordance to Equation 2 in the registered PDD and methodology:

$$BE_y = EG_{PJ,y} \cdot EF_{BL,CO2,y} \quad (\text{Equation 2})$$

AM0029 requires that baseline emissions are calculated by multiplying the electricity generated in the project plant ($EG_{PJ,y}$) with a baseline CO2 emission factor ($EF_{BL,CO2,y}$). The methodology requires project participants to use for $EF_{BL,CO2,y}$ the lowest emission factor among the following three options:

Option 1 – The build margin (BM) as per the “Tool to calculate the emission factor for an electricity system”;

Option 2 – The combined margin (CM) as per the “Tool to calculate the emission factor for an electricity system” using a 50/50 OM/BM weight; and

Option 3 – The emission factor of the technology (and fuel).

As stated in the PDD, the most likely technology that would be used instead of CCGT is OCGT plant and this has therefore been chosen for the calculation of Option 3. As per equation (3) the input parameters for this technology are as follows:

$$EF_{BL,CO_2,y} = \left(\frac{COEF_{BL}}{\eta_{BL}} \right) * 3.6 GJ / MWh \quad (\text{Equation 3})$$

Where:

$COEF_{BL}$ = the fuel emission coefficient (tCO₂e/GJ), (IPCC default emission factor for natural gas) was used.

η_{BL} = the energy efficiency of the technology, 39.5% (conservative default efficiency factor for new gas-fired OCGT units built after 2000, as contained in Annex I of the "Tool to calculate the emission factor of an electricity system" v2.2.1) was applied.

The resulting value for EF_{BL,CO_2} is calculated to be **0.511 tCO₂/MWh**

Amount of electricity generated during the monitoring period is determined as 6,971, 973 MWh

For the monitoring period in consideration, the relevant parameter values and the resulting baseline emissions are:

Parameter:	Unit:	Value:
$EG_{PJ,TOTAL,y}$	(MWh)	6,832,533
η_{BL}	(--)	0.395
$COEF_{BL}$	(tCO ₂ e/GJ)	0.0561
BL_y	(tCO ₂)	3,493,414

E.2. Calculation of project emissions or actual net GHG removals by sinks

This shall be calculated according to the formulae presented in Section B.6.3 of the registered PDD.

The project activity is on-site combustion of natural gas to generate electricity. The source of project emissions is the fuel used for the project activity (natural gas). The parameters included in the calculations are the volume and composition of the fuel. The CO₂ emissions from electricity generation (PE_y) are calculated as follows:

$$PE_y = \sum FC_{f,y} * COEF_{f,y} \quad (\text{Equation 1})$$

Where:

$FC_{f,y}$ = the total volume of natural gas or other fuel 'f' combusted in the project plant or other start-up fuel (m³ or similar) in year(s) y

$COEF_{f,y}$ = the CO₂ emission coefficient (tCO₂/m³ or similar) in year(s) for each fuel and is obtained as:

$$COEF_{f,y} = \sum NCV_{f,y} * EF_{CO_2,f,y} * OXID_f \quad (\text{Equation 1a})$$

For the monitoring period in consideration, the relevant parameter values and the resulting CO₂ emissions from the project activity due to combustion are:

Parameter:	Unit:	Value:
$Oxid_f$	(--)	1
$EF_{CO_2,f,y}$	(tCO ₂ /GJ)	0.0386
$NCV_{f,y}$	(GJ/m ³)	0.0449
$COEF_{f,y}$	(tCO _{2e} /GJ)	0.0017
$FC_{f,y}$	(m ³)	1,494,387,161
PE_y	(tCO ₂)	2,588,469

E.3. Calculation of leakage

As stated in the PDD, there is no leakage associated with the project activity, because fugitive upstream CH₄ emissions from gas transformation and distribution apply to both the baseline and project scenario. The project will not give rise to increases fugitive emissions and, based upon a lower gas feed requirement, leakage emissions from arising from fugitive CH₄ emissions may be negative; however, for the purposes of simplicity and conservativeness $LE_{CH_4,y}$ was treated as zero. There will be no LNG consumption in the project activity, so $LE_{LNG,CO_2,y}$ will be zero. Therefore, leakage emissions are calculated to be zero (see Section B.6.1 of the registered PDD for justification).

E.4. Summary of calculation of emission reductions or net GHG removals by sinks

Item	Baseline emissions or baseline net GHG removals by sinks (t CO ₂ e)	Project emissions or actual net GHG removals by sinks (t CO ₂ e)	Leakage (t CO ₂ e)	GHG emission reductions or net GHG removals by sinks (t CO ₂ e) achieved in the monitoring period		
				Up to 31/12/2012	From 01/01/2013	Total amount
Total	3,493,414	2,588,469	0	-	904,944	904,944

E.5. Comparison of actual emission reductions or net GHG removals by sinks with estimates in registered PDD

Item	Values estimated in ex ante calculation of registered PDD	Actual values achieved during this monitoring period
Emission reductions or GHG removals by sinks (t CO ₂ e)	1,192,425	904,944

E.6. Remarks on difference from estimated value in registered PDD

During the monitoring period in consideration, the actual emission reductions achieved were 24% lower than the estimated emission reduction over the same period (i.e. a period of 365 days in 2013-2015) presented in the registered PDD.

Baseline emissions were lower due to electricity generation below the forecast in the PDD (due to the events listed in Section B.1). It should also be noted that the NCV in the PDD was from a literature source, while that in the MR is from measurements.

Appendix 1. Contact information of project participants and responsible persons/entities

Project participant and/or responsible person/ entity	☒ Project participant ☐ Person/entity responsible for completing the CDM-MR-FORM
Organization name	Shell Petroleum Development Company of Nigeria Limited
Street/P.O. Box	P O Box 263 Port Harcourt, Nigeria
Building	
City	Port Harcourt
State/region	Rivers State
Postcode	
Country	Nigeria
Telephone	+234 807 0221027
Fax	
E-mail	C.Ozumba@Shell.com
Website	www.shell.com
Contact person	Chinyere Ozumba
Title	Dr
Salutation	
Last name	Ozumba
Middle name	
First name	Chinyere
Department	Biodiversity Conservation and CO2/CDM
Mobile	
Direct fax	
Direct tel.	+234 807 0221027
Personal e-mail	

Project participant and/or responsible person/ entity	☐ Project participant ☒ Person/entity responsible for completing the CDM-MR-FORM
Organization name	Carbon- Limits Nigeria
Street/P.O. Box	Plot 13/14 Ligali Ayorinde
Building	FF Tower Building
City	Victoria Island
State/region	Lagos State
Postcode	
Country	Nigeria
Telephone	+234 1 2798969
Fax	
E-mail	paul.parks@carbonlimits.no
Website	www.carbonlimitsngr.com
Contact person	Paul Parks
Title	Mr
Salutation	

Last name	Parks
Middle name	
First name	Paul
Department	
Mobile	
Direct fax	
Direct tel.	
Personal e-mail	

Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
05.1	4 May 2015	Editorial revision to correct version numbering.
05.0	1 April 2015	Revisions to: • Include provisions related to delayed submission of a monitoring plan; • Provisions related to the Host Party; • Remove reference to programme of activities; • Overall editorial improvement.
04.0	25 June 2014	Revisions to: • Include the Attachment: Instructions for filling out the monitoring report form (these instructions supersede the "Guideline: Completing the monitoring report form" (Version 04.0)); • Include provisions related to standardized baselines; • Add contact information on a responsible person(s)/ entity(ies) for completing the CDM-MR-FORM in A.6 and Appendix 1; • Change the reference number from <i>F-CDM-MR</i> to <i>CDM-MR-FORM</i>; • Editorial improvement.
03.2	5 November 2013	Editorial revision to correct table in page 1.
03.1	2 January 2013	Editorial revision to correct table in section E.5.
03.0	3 December 2012	Revision required to introduce a provision on reporting actual emission reductions or net GHG removals by sinks for the period up to 31 December 2012 and the period from 1 January 2013 onwards (EB70, Annex 11).
02.0	13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the monitoring report form" (EB 66, Annex 20).
01	28 May 2010	EB 54, Annex 34. Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Issuance Keywords: monitoring report		