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| Project | **Assa North - Ohaji South Project** |
| Originating Company | **The Shell Petroleum Development Company of Nigeria Ltd.** |
| Document Title | **Note to File – Confirmation of the ANOH FLB Substation 103 as firm scope in the AAJV Contract.** |
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| **Revision Philosophy**  All FEED documents for review will be issued at R01, with subsequent R02, R03, etc as required with status IFR or IFA  All revisions approved for issue or design will be issued at A01, with subsequent A02, A03, etc as required with status AFD.  All Detailed design documents for review will be issued at D01, with subsequent D02, D03, etc as required  Documents approved for Construction will be issued at C01, C02, and C03 respectively with status AFC.  Revisions approved for Tender will be issued as T01, with subsequent come as T02, T03 etc with status AFT  All revisions approved for Purchase will be issued as P01, with subsequent P02, P03, etc with status AFP  All Cancelled documents will be issued at X01, X02, and X03 respectively with status CAN.  Documents or drawings revised as “As built” will be issued as Z01, Z02, Z03 etc with status ASB.  Narrative sections revised from previous approved issues are to be noted in the table below and/or highlighted in the RH margin (using the appropriate revision status) thus: | A02  Previous revision details to be removed from the cover page at subsequent issues  Drawings/diagrams revised from previous approved issues are highlighted by 'clouding' the affected areas and by the use of a triangle containing the revision status. | | | | | | |
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**TABLE OF CONTENTS**

[1. Introduction 4](#_Toc39507930)

[1.1. Project Overview / Description 4](#_Toc39507931)

[1.2. Purpose 5](#_Toc39507932)

[1.3. Project References 5](#_Toc39507933)

[2. Background 5](#_Toc39507934)

[3. FLB substation 103 scope description 5](#_Toc39507935)

[4. scope assignment 5](#_Toc39507936)

[4.1. PT2020 applicable terminology 6](#_Toc39507937)

[4.2. e-MoC requirement 6](#_Toc39507938)

**List of Tables**

No table of figures entries found.

**List of Figures**

No table of figures entries found.

# Introduction

## Project Overview / Description

The Assa North Gas Development aims to support the growth in Nigeria’s domestic gas production based on the Federal Government of Nigeria’s programs for additional power and industrial projects. The growth plan includes gas supply to the Western Domestic Gas Market through the Obiafu-Obrikom-Oben (OB3) gas network.

The targeted reservoirs straddle the Assa North field located within SPDC JV’s OML 21 and SEPLAT JV’s OML53, where it is called Ohaji South. The field is thus unitized under a Unitization and Unit Operating Agreement (UUOA) between the Unit Partners: SPDC JV and SEPLAT JV.

The unitized field will be produced through an Upstream Facility which gathers and allocates the field production between two separate midstream plants belonging to each of the Unit Partners. The Upstream Facility will be jointly owned by the unit partners and will be operated by SPDC JV. SPDC JV will also operate its own separate plant referred to as the Assa North Primary Treatment Facility (PTF).

The first phase of development is driven by the two main reservoirs in Assa North/Ohaji South - the H1000X and H4000X, with combined in place volumes of 4.3 Tcf gas and 197 MMbbls condensate. The second phase of development includes the operation of the Upstream Facility at a lower pressure and the installation of depletion compression packages at the gas plants. The third phase of development involves potential development of the minor reservoirs in the Assa North / Ohaji South field (E9000, E9500, H2000, H2500 and H3000).

The processing capacity of the Upstream Facility will be 600 MMscf/d based on the available reserves and the requirement to feed two separate 300MMscf/d capacity plants.

The gas processing capacity of the PTF will be 300MMscf/d based on a commitment to a Daily Contractual Quantity (DCQ) of 250 MMscf/d with provisions for up to 10% increased uptake and other uses. The complimentary condensate stabilization capacity of the plant will be 20,000 bpd.

The Project Site is located in the Ohaji Egbema Local Government Area of Imo State of Nigeria, about 70 km NW of Port Harcourt. The site is land locked with a firm, dry and fairly flat terrain with ground elevations ranging from 44 to 48 metres above mean sea level.

The overall scope of this project includes the Upstream Facility (drilling and completion of 6 wells, wells fluid gathering and allocation); Primary Treatment Facility (PTF) (gas and hydrocarbon liquids processing - dehydration, conditioning, compression and metering); Field Logistics Base (FLB) (Industrial Area and the Residential Area); Community Electricity Interdependency Project (CEIP); and products evacuation pipelines. The Proposed pipeline infrastructure consists of

* 8” x 1km produced water / condensate evacuation pipeline,
* 12” x 28km Assa North – Obite Back-up Multiphase pipeline,
* Condensate export pipeline to a Refinery adjacent to the PTF
* Assa North – OB3 gas evacuation Pipeline.

The 8” x 1km produced water / condensate evacuation pipeline and 12” x 28km Assa North – Obite Back-up Multiphase pipeline will be built and owned by SPDC while the Condensate Export Pipeline and Assa North – OB3 gas evacuation pipeline will be built, owned and operated by others.

## Purpose

This document is a note on how the project handled the optional scope (Supply of FLB Substation 103) duplicated in the following contracts – FLB & Site Preparation and the Electrical System procurement one. The documentation of this activity is for project file, future reference and historical traceability.

## Project References

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| **Document** | **Title** |
| NG01021764 | Site Preparation and Industrial Area Infrastructure Contract - AAJV |
| NG01023392 | Supply of Electrical Systems Packages and Services For the Assa North Gas Project – Slot Engineering |
| ANG-CW207473-GEN-EA-2384-00001 | Key Single Line Diagram |

# Background

During the contract tender stages, the scope of work concerning the provision of Electrical modularised substation tagged SS-103 was included as optional in Electrical System RFQ and the EPC tender for the FLB/Site Preparation. This scope was carried through to the award stages and included in the ACVs of the two contracts.

At the inception of the execution of the contracts, it was needful to firm the optional scope in one of the contracts to avoid issues with duplication of activities.

# FLB substation 103 scope description

The scope is basically procurement of modularised substation complete with 400V LV Switchboard, 2 Nos 1.3MVA 11/0.4kV transformers, lighting distribution boards, Interface Relay Panels, vendor support for installation & pre-commissioning/commissioning. The scope also included detailed design of the full scope of equipment listed. The original contract value for the SS103 FLB scope was €738,760.71 in the Slot Engineering Contract.

# scope assignment

After due consideration amongst teams within the project, the scope was made firm and sacrosanct in the *Site Preparation & Industrial Area Infrastructure* Contract being executed by Alphaden/Alcon JV under contract NG01021764. The same scope of work were removed from the contract NG01023392 - *Supply of Electrical Systems Packages and Services for the Assa North Gas Project –* being executed by Slot Engineering. A firm Purchase Order has been placed on AAJV through their existing contract while an appropriate amount in scope has been discounted from the original commitment to Slot Engineering. There is no misgiving in the transaction.

## PT2020 applicable terminology

The PT2020 most appropriate terminology applicable in this strategy is “EFFICIENT EXECUTION” of strategy by the project team.

## e-MoC requirement

It is not required to raise an MoC for this activity as it is within PT2020 framework of efficient execution of scope.