



Egbema, Egbema West, Ugada, Oguta Alternative Crude Evacuation (ACE) and AG Solution Opportunity Mandate

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Document History

Issue	Reason for Change	Reviewed	Agreed	Approved	Date
Signature					

The Mandate establishes the accountability of the BOM and provides him/her with the room to manage the opportunity on a day-to-day basis (Ref. ORM pg. 10). The BOM writes the mandate that he/she needs and proposes this to the DE.

Opportunity Mandate	
Opportunity Name	Egbema, Egbema West, Ugada, Oguta Alternative Crude Evacuation (ACE) and AG Solution

1. Opportunity Description, Objective & Value

In 2021, Shell as a signatory to the "World Bank's Zero Routine Flaring by 2030", committed to eliminate routine flaring from its Upstream operations by 2025 (5 years earlier than the World bank target). This commitment implies production shut-in for SPDC facilities with no AG solution namely Ahia, Obele, Oguta & Ubie and NEPL Operated OML20 Transferred fields Egbema, Egbema West and Ugada. These have been earmarked as NGFCP facilities for flare gas offtake by third party companies. The federal government of Nigeria, FGN (Nigeria)'s commitment is also to end routine flaring by 2050. The Shell drive enables the FGN to achieve its emission reduction objectives.

Oguta and Egbema do not have AG solutions and since February 2022, have not produced due to illegal connections and bunkering activities in the Zone 6 of the TNP, thus locking in ca. 2Kbopd. More so, when Zone 6 becomes available, illegal connections and bunkering in associated zones may result in very low or zero throughput.

An opportunity was identified in July 2023 to evacuate ~2kbopd /4MMscf/d from Oguta via Oando (formerly NAOC) JV facilities. This involved rerouting Oguta FS production to Oand's Akri FS onward to Brass Terminals. This was to also unlock additional ~2kbopd/4MMscf/d from execution of short-term oil generating activities in Oguta and harness value from the associated gas of ~2kbopd/12MMscf/d from HGOR wells. Thus, extending the Oguta field production beyond Q4 2024. This has additional opportunity in unlocking ca. 10 kbopd from the Egbema and Egbema West Assets by providing alternative evacuation route, via rerouting the follow from Egbema manifold to Oguta manifold.

Initial key milestones identified for the Oguta/Egbema rerouting project included.

- Commencement of engagement with Oando and NEPL to get alignments (technical and commercial) to reroute production from SPDC assets to Oando Asset. Proposal was for all onsite execution activities beyond SPDC battery limits to be executed by Oando and/or NEPL.
- Commencement of phase 1 (OGUTA) to lay 5.3 km oil and gas lines, linking Oguta manifold to Akri flow station via exiting ROW, installation of LACT meter at Oguta manifold, tie-in works at Akri FS end for oil and gas lines.
- Commencement of phase 2 (EGBM /EGBW Liquid evacuation) with work at Egbema manifold to reverse flow 10" Oguta to Egbema line. Associated Gas Solutions was to be commercialized via Nigerian Gas Flare Commercialization Programme (NGFCP) or Egbema AG/NAG project.
- STOG execution to deliver planned Oguta STOG potential of 2 kbopd and HGOR Locked-In-Potential of 2 kbopd / 12MMscf/d.

NEPL, operator of the OML20 Transferred fields had since worked the Egbema and Egbema West scope of the opportunity and issued a Concept Selection Report to JV partners for review. This followed the constitution of a Joint Concept Select team by JV Partners to explore an alternative crude oil evacuation plan for OML 20 Asset after SPDC declared force majeure on Bonny light due to theft from illegal connections in March 2022. NEPL studies evaluated four options (1. Backflowing OML20 Asset through Oguta to Akri, 2. Trucking, 3 Waltersmith Refinery, 4. Barging at Orashi River) and recommended the progression of option 1 (cheapest) at a cost of about \$7.6 mln (MOD 100%) and a project delivery schedule of 11 months (fastest). NEPL engaged Oando on the availability of ullage in their Akri facility, but Oando is yet to revert. No commercial engagement had been held between NEPL and Oando for use of Oando's facility. Key risks identified by the NEPL study included management approval, contracting, regulatory approval and resource availability. Key scope assumption is utilization of existing pipelines with plans to do integrity (Oguta Akri gas pipeline and Oguta-Egbema Oil pipeline) checks during FEED.

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The **key opportunity** is to safeguard the potential to produce and evacuate up to 11kbopd and 15 MMscfd oil and gas from the Egbema, Egbema West and Oguta nodes from current IPSC wells and STOG activities. This will also reduce GHG emissions.

The **key threats** to the opportunity include JV Partners alignment, 3rd Party (Oando) facility (Akri) availability and alignment.

<u>Description</u> (Wider context around the opportunity can be included)	The concept is to reverse direction of flow of 10-inch Oguta to Egbema line, to enable stabilised liquid evacuation from Egbema to Oguta manifold and onward to AKRI FS Plan is to lay new (or use existing pipeline if integrity checks confirm useability as proposed by NEPL studies which planned integrity check during FEED) 2 X 5.3Km 6 inch oil and gas pipeline btw Oguta-Akri, Install fiscal meters for oil and gas measurement and allocation.
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2. Givens/Boundary Conditions *(HSE, business, process, utilities, project delivery, etc.)*

- Egbem, Egbema West, Ugada and Oguta fields are in scope.
- Egbema West AG/NAG project are out of scope of this opportunity.
- Nigerian Gas Flare Commercialization Programme (NGFCP) requirements to be honored.

3. Key Value and Delivery Assumptions *(that will affect value, time, cost & objectives, internal & external)*

- Funding will be available for this project.
- SPDC will progress the opportunity following OML20 Operator handover from NEPL.
- Internal SPDC alignment will be secured.
- NUPRC and JV Partners alignment will be secured.
- Timely regulatory approvals (EIA).
- Timely Oando alignment on ullage availability at Akri and conclusion of commercial discussions.
- NGFCP implementation execution delivery schedule is not yet confirmed and hence risk being delayed.

4. Governance, Roles & Responsibilities *(including governance & LoS)*

Line of Sight & Key Team Leads			Decision Review Board & functional support role	
DRB			Wessel de Haas	GM/DMD, SPDC Nigeria
Amos Trost	Decision Executive		Benno Touw	GM Nigeria COG Projects
Peter Obidike	BOM		Ronan D'Souza	GM Commercial COG Nigeria
Obioma Iwuchukwu	FEDM		Henry Bristol	VP Midstream Nigeria
Ebere Ebeze	Project Manager		Abdulrahman Mijinyawa	GM Development Nigeria
			Laurie Schmidt	GM CP Nigeria

Roles: As defined by the ORS

- The BOM is responsible for the overall integrated TECOP management and delivery of the opportunity to secure maximum value for Shell and its stakeholders.
- The DE has the accountability for the effective management of business opportunities so that maximum value is realised for Shell and its stakeholders. He / she is further accountable for delivery of the opportunity, the existence of effective risk management and an opportunity control framework that provides adequate assurance to the Line of sight.
- The DRB accountabilities - members of the DRB assist the DE in making good quality decisions in relation to the opportunity by providing support and advice based on their expertise. They challenge the DE to apply best practice to the opportunity and support them in addressing any weaknesses in the opportunity team or overall approach to the opportunity.

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5. Human Resources and Budget (needed by the Opportunity team to deliver the opportunity to an investment proposal or to the next decision point)

- Project Lead is to provide technical assurance of the development project. The support is provided through a Development team in Nigeria together with a P & T wells team located in-country (pre-DG3)
- Project manager is to guide the project to OSD through the Onshore Asset brown field projects (OABP) team and support from asset subsurface and facilities team in location (post DG3)
- Project BOM is responsible and accountable for the overall management of the opportunity

6.1. Key DE/DRB Decisions: (Key decisions which fall outside of the BOM Mandate and must be elevated to the DE/DRB)

1. Project assurance plan and minimum gate deliverables
2. Approve investment proposal by team (GIP)
3. Funding mechanism

6.2. Timing of Key Decisions (indicate who decision should be raised to and whether a Decision Review Board is required ahead of that decision; insert roadmap picture)

#	Expected Key Decisions	Estimated Timing	BOM	DE(DRB)	VP
1	Concept Select Decision	March -2025	✓	✓	
2	FID	Dec -2025		✓	
3	OSD	June -2027		✓	

6.3. Communication (Describe the agreed communication between BOM, DE & DRB (frequency, means))

Meeting	Frequency	Duration	Format
DE & BOM	Monthly (for status updates); As required (for decisions)	30 mins	F2F/Virtual
DE, BOM, DRB	Monthly (for status updates); As required (for decisions)	30 mins	F2F/Virtual
JV Partners	Monthly or as required for alignment or decisions	60mins	F2F/Virtual

7. Change Control

Date	Description of Update

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APPENDIX 1. Key Roles and Responsibilities

As per ORS guidance

https://eu001-sp.shell.com/sites/AAAAA7019/Documents/ORS_interactive_PDF_v16_10.pdf

Key Roles and Responsibilities

Decision Executive (DE): Trost Amos

The DE has the accountability for the effective management of business opportunities so that maximum value is realised for Shell and its stakeholders. He is further accountable for delivery of the opportunity, the existence of effective risk management and an opportunity control framework that provides adequate assurance to the Line of sight.

On this Egbema, Egbema West and Oguta Alternative Crude evacuation project the DE activities include:

- "Stop, hold, continue" decision at each opportunity milestone/decision gate
- Supporting/Approving Assurance robustness for the Opportunity
- "Stop, hold, continue" decision at each decision gate
- Lead and influence senior stakeholders
- Champion effective / suitable application of the ORS
- Define key strategies
- Ensure right resources; competence and numbers
- Ensure appropriate DRB composition and alignment
- Champion the opportunity in relevant parts of the business
- Chair the DRB
- Agree mandate with BOM
- Alignment with Line of Sight

Portfolio/Project Business Opportunity Manager (BOM): Peter Obidike

The DE is supported by a Business Opportunity Manager (BOM) who is accountable for the overall, day-to-day management of the opportunity. The opportunity's governance structure, resources required to deliver the opportunity and interactions between BOM and DE are formally captured in a mandate. The BOM accesses relevant knowledge and expertise available within and outside Shell, as appropriate, including best practices and lessons learned from Assurance Reviews and Post Implementation Reviews, and applies/replicable or adopt standardized solutions when appropriate.

The BOM is responsible to the DE for the overall integrated TECOP management of the opportunity to secure maximum value for Shell and its stakeholders. The BOM is the business Integrator. He or She is accountable to the DE for overall delivery of the project that is robust to the TECOP spectrum of outcomes To do this the BOM should deliver the opportunity within the terms of the agreed mandate and use best practices. The BOM is accountable for delivering value and managing risks (upside and downside) and for obtaining appropriate technical and non-technical support.

On this Egbema, Egbema West and Oguta Alternative Crude evacuation project the BOM activities include:

- Preparation of the DE BOM Mandate for the Opportunity (For DE Approval)
- Framing the Opportunity(ies)
- Prepare and Manage:
 - Opportunity Road Map
 - Stakeholder Engagement Plan
 - Opportunity Risk Managements Plan
 - Opportunity Assurance Plan
 - Opportunity Management of Change Process
- Definition of Composition of the Supporting Opportunity Team
- Coordination and Management of DRB
- Coordinate and Manage the Project Funding Effort
- Prepare and coordinate GIP Support (Functional, CIC, etc.) and Approvals

Front-End Development Manager (FEDM): Obioma Iwuchukwu

The FEDM deliver in an integrating leadership role pre-DG3. The Front-End Development Manager (FEDM) is the technical integrator. He/she is accountable to the BOM for integration and delivery of the Technical Concept across the Subsurface, Surface and Wells functions that is robust to the range of ECOP outcomes.

The FEDM is responsible for managing the technical opportunity team with accountability for ensuring integration of full TECOP spectrum of risk and uncertainty into the technical solution/concept/project definition (Subsurface-Surface-Wells) and in cost, schedule and production forecast.

Project Manager (PM): Bolaji Popoola

The PM develops the project execution strategy and leads the project team in executing the project. The PM is specifically responsible for the development and realization of the hardware of the assets in a capital project. From execute phase onwards it is the PM who leads the development of the opportunity prior to handing over to an Asset Manager once the asset becomes operational.

As the opportunity matures, the roles of FEDM and PM evolve and the PM transitions into a more active project management role post Decision Gate 3.

The Decision Review board

The DRB accountabilities - members of the DRB assist the DE in making good quality decisions in relation to the opportunity by providing support and advice based on their expertise. They challenge the DE to apply best practice to the opportunity and support them in addressing any weaknesses in the opportunity team or overall approach to the opportunity. Some of the key DRB function are captured below:

- Provide expertise
- Assist decision making
- Secure technical / functional support
- Facilitate opportunity delivery
- Secures appropriate resource for the opportunity team
- Support and challenge decision making
- Support decision assurance

Businesses and Functions (BF)

The BF ensure that staff in key roles in the delivery of opportunities, are provided with adequate training, resources and support. Activities related to management and delivery of the opportunity must be reflected in the individual annual targets and performance appraisals of those involved. Some of the BF key functions include:

- Opportunity delivery that maximizes value
- Manage risks and upsides
- Prepare and execute the opportunity plan
- Define and resource opportunity team
- Evaluate and select preferred options
- Motivate the team and drive effective behaviours
- Develop and maintain counterparty relationships
- Undertake commercial negotiations
- Fostering creativity and innovation to maximum value

Lead Project Engineering functions include

- Asset delivery
- Manage Define contracts
- Provide cost information

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