Investment Proposal

Summary information

Business unit and company	The Shell Petroleum Development Company of Nigeria(SPDC)
Group equity interest	100% in SPDC, whereas SPDC is the Operator of an unincorporated JV with a 30% participating interest share.
Other shareholders /Partners	Nigeria National Petroleum Company (NNPC: 55%), Total E&P Nigeria Limited(TEPNL): 10%, Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV
Business or Function	Upstream International
Amount	Pre-FID commitment: USD8.12 mln Shell Share, MOD, 50/50, (USD 27.06mln 100% Unit) Lifecycle: USD 113.12mln Shell Share, MOD, 50/50 (USD 377.05mln 100% Unit)
Project	EA FOD Step1: Pre-FID Commitment

Main commitments

Description	Previously Approved IP 2015	2015 Spend to Date	Available from 2015 IP	This Proposal		Revised Pre-FID IP Budget	
USD (mln) 50/50 MOD	100%	100%	100%	100%	Shell Share	100%	Shell Share
EIA/BM Studies	2.94	2.03	0.91	-	-	2.94	0.88
PMT	0.60	0.42	0.18	-	-	0.60	0.18
Casing & Accessories	-	-	-	11.52	3.46	11.52	3.46
Sand Control/Chemicals	-	-	-	3.23	0.97	3.23	0.97
Tubing & Other Completions	-	-	-	5.90	1.77	5.90	1.77
Wellhead/ Xmas trees	-	-	-	6.41	1.92	6.41	1.92
Total USD mln, 50/50 MOD	**3.54**	**2.45**	**1.09**	**27.06**	**8.12**	**30.60**	**9.18**

This Pre-FID IP is for the EA FOD Step 1 Project commitment on Long Lead Items being wellheads and well accessories required to ensure a project On Stream Date in December 2018. The commitment or order for the LLIs will be made in Q3 2016 while actual expenditure is planned for 2017 when the LLIs will be received. It is a supplemental IP on the Pre-FID IP Feasex of USD3.5mln (100% JV) approved in 2015 for EIA, reference attachment 1. Table 1 (above) shows summary of this proposal and earlier approved IP.

Reserves/Resources	Develop additional volumes of 13.20 MMboe, SS, by 2027 with OSD in Dec 2018.

Production

The project will develop additional volumes of 41.82MMstb of oil and 12.68Bscf associated sales gas contingent resource (2C) from EA and EJA fields via drilling and completion of 13 new development wells and 1 work over well. Of this volume, 12.26 MMstb of oil and 3.28 Bscf are contingent on the appraisal scope within the project. Incremental oil production from this project peaks at ~25000bopd (annualized), with associated sales gas production reaching circa ~10MMscfd by 2020 (Figure 1).

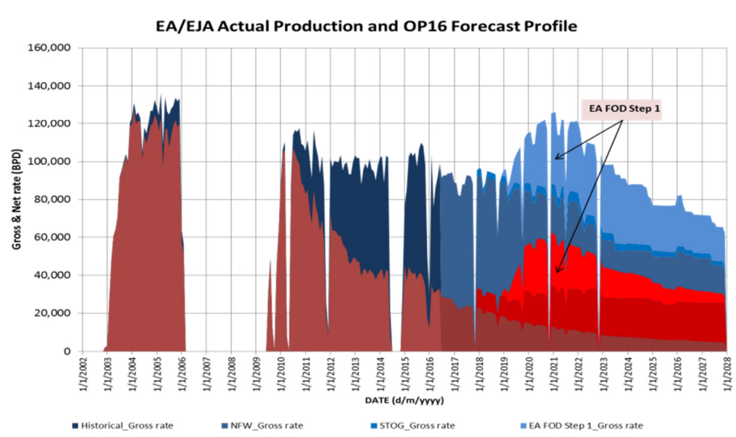
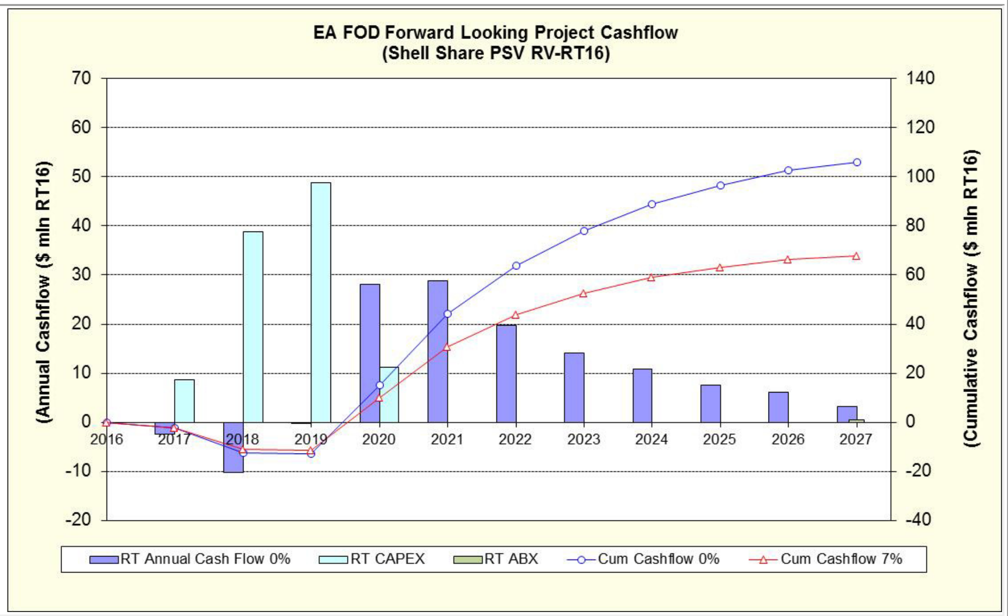


Figure 1: EA/EJA Actual Production and Alternative Funding Forecast Profile

Source and form of financing	Shell Share of capital expenditure will be met by SPDC's own cash flow. NNPC's share will be financed through Alternative Funding (AF) arrangement.

Summary cash flow



Summary economics

Summary Economics (RV-RT16) Shell Share	NPV7% (USD mln)	VIR7%	RTEP (%)
Base Case	-1.2	-0.16	NA
High Capex (+15%)	-1.5	-0.16	NA
Full Project Scope - Base Case	67.7	0.75	88%

Section 1: The proposal (management summary)

This Pre-FID Investment Proposal seeks organisational approval additional USD27mln (MOD, 100% 50/50) funding for ordering of wells long lead items towards the execution of EA FOD Step1 Project. The main objective is to enable ordering of the wells LLIs - Conductor Sharing Wellheads which have a 15-month procurement lead time and other associated equipment project to support delivery of 1st oil in December 2018. This commitment has received the support of the AF Joint Funding Team. See attachment 1.

A further commitment of USD6.2mln (MOD, 100%) on EA FOD1 is required to support rig mobilisation/demobilisation commitment in September 2016 to ensure timely start of drilling in Forcados and subsequently EA, and guarantee on-stream dates. The total rig mobilisation/demobilisation cost estimate of USD8.3mln (MOD, 100%) is shared by the Forcados offshore/NAG wells and the EA FOD1 project.

Delaying the pre-FID commitment until financial close would result in:

- **Schedule Delay:** This directly impacts the schedule and delays the on-stream-date delivery significantly.
- **Reduction in Produced Oil Volume:** In view of the Sea Eagle FPSO end 2027 cut-off date assumed in the forecast premise, a delay in production reduces the total additional recoverable volume developed for the project pre-dry dock. Monthly reduction is estimated to be 0.3% of total volume pre dry-dock.

Table 2A: Full Project Expenditure Description and Phasing (US$, MOD, 100% JV)

Item Description	PROPOSAL	2016	2017	2018	2019	2020	2021
Rig Mob/Post Drill Survey	6,429			4,716	240	1,474	
Oil Development Drilling & Completion	346,400		27,064	117,916	165,878	35,543	
Oil Flowlines, Pipelines and Hookup	12,742		1,869	6,782	2,193	1,899	
PMT Wells	8,129			3,402	3,893	834	-
PMT Facilities	3,032		445	1,614	522	452	
SCD-Facilities	315		46	168	54	47	-
Total Capex (JFT approved)	**365,572**	**-**	**28,933**	**129,414**	**168,310**	**38,915**	**-**
Total Cost (with PMT, excl SCD)	**376,733**	**-**	**29,377**	**134,430**	**172,725**	**40,201**	**-**
Grand Total (Capex + PMT + SCD)	**377,049**	**-**	**29,424**	**134,598**	**172,779**	**40,248**	**-**

Table 2B: Full Project Expenditure Description and Phasing (US$, MOD, SS)

Item Description	PROPOSAL	2016	2017	2018	2019	2020	2021
Rig Mob/Post Drill Survey	1,929	-	-	1,415	72	442	-
Oil Development Drilling & Completion	103,920	-	8,119	35,375	49,763	10,663	-
Oil Flowlines, Pipelines and Hookup	3,823	-	561	2,035	658	570	-
PMT Wells	2,439	-	-	1,021	1,168	250	-
PMT Facilities	910	-	133	484	157	136	-
SCD-Facilities	95	-	14	50	16	14	-
Total Capex (JFT approved)	**109,672**	**-**	**8,680**	**38,824**	**50,493**	**11,675**	**-**
Total Cost (with PMT, excl SCD)	**113,020**	**-**	**8,813**	**40,329**	**51,817**	**12,060**	**-**
Grand Total (Capex + PMT + SCD)	**113,115**	**-**	**8,827**	**40,379**	**51,834**	**12,074**	**-**

Section 2: Value proposition, strategic and financial context

The EA FOD Step 1 project aligns with SPDC's goals and priorities. It was instrumental to the case for the renewal of OML 79 license in December 2014. The project will develop additional volumes of 41.82MMstb of oil and 12.68Bscf associated sales gas contingent resource (2C(PostDG3)) from EA and EJA fields via drilling and completion of 13 new development wells and 1 work over well. This reward is limited to Sea Eagle sail-away date of end 2027.

Based on dynamic modelling in the FDP, it is expected that an additional 4.66MMboe of 2C(Unclarified) contingent resources (4.56 MMbbls + 0.81 Bscf) will be booked for this project through performance update after some 3 years of production. These 2C (Unclarified) volumes are not included in the economics evaluation in this GIP, as these volumes will not be booked at FID.

2.1 Summary Economics

The results of the Pre-FID evaluation are shown in Table 3, cost-only without revenue. The full project value is in Table 4 below, using assured 50/50 full cost estimates and the production forecast as provided by the project team.

Sensitivities were also carried out on the base case to show the impact of various scenarios on the value of the project. Refer to the Tornado (Figure 2) below for the results of these sensitivities.

The base case assumes the presidential advised price of $2.3/Mscf for the EA/Bonga gas diversion to Gigagas. This price has been kept flat in MOD for the life of the project though subject to negotiations and as such, represents a pessimistic view. The project returned robust VIR7 above the screening value of 0.6 for the base case and various sensitivities.

Table 3: Pre-FID Economics (Shell Share RV RT-16)

PV Reference Date : 1/7/2016	NPV $US mln Shell Share		VIR	RTEP	UTC $/bbl - RT		Payout Time(RT)	Maximum Exposure. (Shell Share)
Cash flow forward from : 2016	**0**	**7%**	**7%**	**%**	**0%**	**7%**	**Year**	**$mln, (yyyy)**
Base Case								
RV ($80/bbl, RT16)	-1.19	-1.22	-0.16	NA	NA	NA	NA	2.0
Sensitivities (Using PSV-RV)								
High Pre-FID cost (+20%)		-1.45	-0.16					

Table 4: Full Project Economics Result (Shell Share RV RT-16)

PV Reference Date: 1/7/2016	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/bbl)		Payout-Time (RT)	Maximum Exposure (RT- AT)
Cash flow forward from: 1/1/2016	**0%**	**7%**	**7%**	**%**	**0%**	**7%**	**(yyyy)**	**$mln (yyyy)**
Base Case								
SV ($60/bbl RT16 & NGMP Gas Profile)	79.1	50.0	0.55					
RV ($80/bbl RT16 & $2.30/mmbtu Flat)	105.8	67.7	0.75	88%	9.8	11.6	2020	*12.7*
HV ($100/bbl RT16 & $NGMP Gas Profile)	134.3	86.7	0.96					
Sensitivities (using RV)								
RV ($80/bbl RT16 & $2.30/mmbtu Flat) Pre-FID cost	-1.19	-1.22	-0.16	NA	NA	NA	NA	*2.0*
High Capex (+20%)		64.7	0.60					
Low Capex (-10%)		69.3	0.85					
High Production (P10)		78.5	0.87					
Low Production (P90)		37.2	0.41					
1-Yr Production Delay		63.0	0.70					
Base (Export Gas Price)		67.1	0.74					

Table 5: Key Project Parameters Data Ranges (100% Project)

Parameter	**Unit**	**Low**	**Mid**	**High**	**Comments**
Capex (MOD)	US$ mln	339.1	376.7	452.1	Capex for EA FOD Step1
Opex (MOD)	US$ mln	3.1	3.8	4.2	Opex includes SCD and ABCM.
Production Volume	mln boe	27.0	44.0	50.3	
Start Up Date	mm/yy	Jun-19	Dec-18	Dec-18	
Production in first 12 months	mln boe	2.63	4.58	4.60	

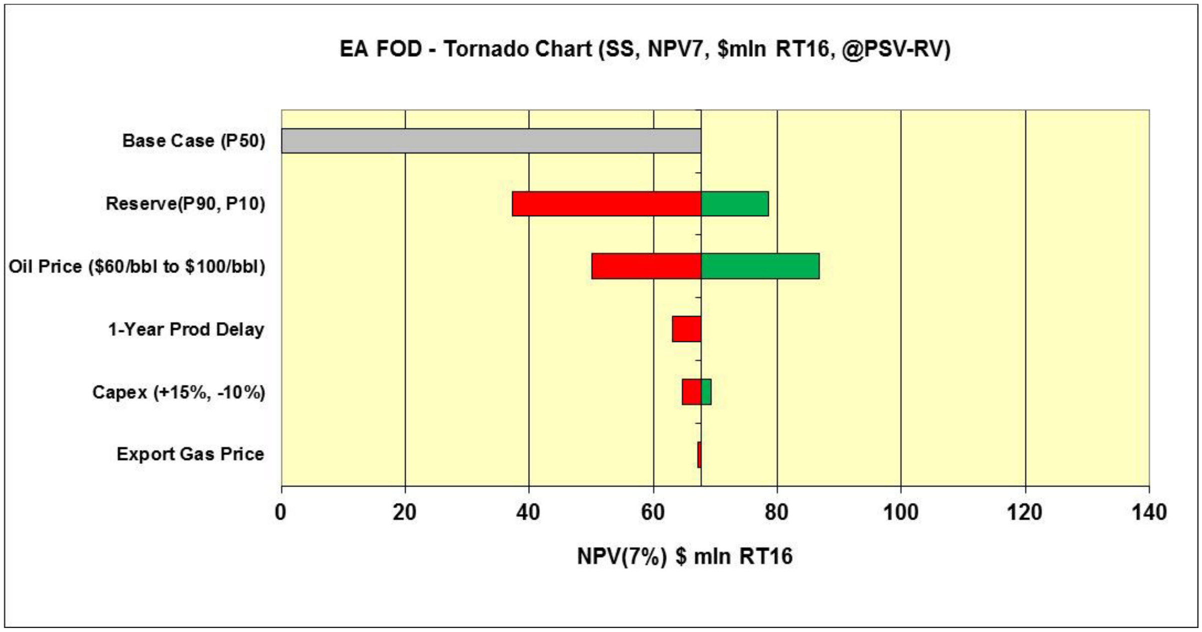


Figure 2: Full Scope Tornado Plot

Economics Assumptions

- Oil Price of $80/bbl RV-RT16 assumed as base with short term prices.
- Gas price of $2.30/mmbtu MOD flat, used as base case in view of EA/Bonga gas diversion to Giga Gas.
- Export Gas price of $1.66/mmbtu RT-16 and NGMP Domestic gas profile used as sensitivities respectively
- Oil was taxed under PPT (PPT tax rate of 85%).
- Flare charge of N10/Mscf
- ABCM OPEX used in the evaluation as provided by the project team
- SCD Opex provided by the project team
- Gas taxed under CITA with AGFA (Associated Gas Framework Agreement) incentive.
- NDDC levy of 3% total expenditure.
- Education tax of 2% assessable profit.
- Gas Heating Value (GHV) of 1000btu/scf and 1150btu/scf Domestic and Export respectively.
- 10% of RT Capex assumed as abandonment cost.

Section 3: Risks, Opportunities, Mitigation Plans and Alternatives

Key Risks

- ***Project Cancellation or non-closure of Alternative Funding*:** This investment is expected to be financed with Alternative Funding (AF) arrangement. In the unlikely event that Financial Close for the AF arrangement is not achieved, the LLIs will be funded through individual JV partner cash call contributions. Shell Share of capital expenditure will be met by SPDC's own cash flow. A resolution has been signed by the JFT members to this effect, and NAOC, who is not participating in the AF, has also formally issued their support for the LLI.

- ***Schedule Slippage*:** The project economics is sensitive to schedule slippage and there are multiple items on critical path. These include: Order of Wells LLI, EIA approval, Award of Contracts, Funding Agreement, Rig mobilization for Forcados offshore activities (as Forcados offshore wells precede the EA wells on the drilling sequence), completion of detailed engineering design, procurement of well-hook up items, drilling and hook-up of first two wells and first oil.

- ***Early Procurement of Wells Long Lead Items*:** With the longest procurement lead time of 15 months, the conductor sharing wellheads stand out as a critical path item on project first oil delivery. Support for this IP enables order of the wells long lead items in August, and a first spud date in EA by November 2017. The NAPIMS award recommendation for the wellhead contract has been received, contract loaded in OMNICOM and approval received from the Joint Funding Team (NNPC/NAPIMS/SPDC/TEPNG) to commit the required USD27mln (100%) ahead of AF financial closure. See attachment 2.

- ***Cost Escalation***: Though the expectation is that prices will remain stable or go lower due to global market demand, bid price escalation in drilling and facilities tenders may occur due to a perceived increase in country risk due to the Niger Delta security situation. This is mitigated by ensuring that the right contingency, risks premium and inflation are incorporated in the level 3 cost estimates.

- ***Early Termination of Rig Contract***: In the unlikely event of reduction of project scope, early termination fee (ETF) or rig stacking cost will be borne by the project. Termination Fee is estimated as 50% of Operating Day Rate x Remaining Days of Contract Duration. Also, the project will bear the cost of well equipment (e.g. Wellhead, Christmas tree, 36" conductors, etc.) already ordered or received that may not be transferable to any other project.

- ***Wellhead Materials Contract:*** Dedicated contract for Conductor Sharing Wellhead and accessories now in place with adequate ceiling for the required work scope.

- ***Environmental Impact Assessment [EIA] Approval***: The project schedule is premised on receipt of EIA approval by August 2016, before alternative funding (AF) financial closure; and thereafter FID will be taken. The EIA approval from FMEnv was received 30 June 2016. The EIA approval from DPR is expected in August 2016. This EIA is premised on the outcome of the environmental evaluation (EE) and biological monitoring (BM) studies which have now been completed and draft report prepared (the EE and BM work scope were the focus of the approved 2015 Pre-FID IP). The project team's outlook on this approval remains August 2016.

- **Key Opportunities**

The key opportunities identified in the project are as follows:

- ***Schedule***: Ordering of the LLIs enables timely arrival of equipment and materials, timely start of drilling to ensure promised OSD and additional produced volume pre-dry-dock can be secured.
- ***Production***: Ordering of the LLIs enables timely arrival of equipment and materials, timely start of drilling to ensure promised OSD and additional produced volume pre-dry-dock can be secured.
- ***SCD Spend Optimization:*** Existing GMOU agreement with EA cluster of communities already made provision for Social Investment for well activities. The 2% commitment for social investment on major projects as also enshrined in the GMoU agreement will only apply to the facility scope of the project. The ER team will explore options to increase community participation in other project activities to secure community trust and support.

Section 4: Carbon management

Based on GHG assessment carried out, the CO2 emission for this project is expected to less than 50ktpa Therefore, no GHG Plan is required.

Section 5: Corporate structure, and governance

This project fits within the existing SPDC corporate structure and governance. Consequently, it will comply and respect all relevant and existing governance requirements.

Section 6: Functional Support and consistency with Group and Business Standards

This proposal complies with Group Business Principles, policies and standards. Full functional support covering SCD is provided for in the full project scope. Additionally, there will be a focus on Nigerian Content Development (NCD) as already indicated above. The Finance, Supply Chain Management, Legal, and Tax functions have provided functional support for this Investment Proposal.

Section 7: Project management, monitoring and review

The project is managed by a properly constituted project team. The Project Controls and Assurance Plan (PCAP) is compliant with the ORS having project specific DRB, DE, BOM and PM in place. A Project Control and Assurance Plan (PCAP & OAP) have been approved to define the applicable controls for DEFINE phase.

Section 8: Budget provision

The project funding plan (including the long lead items) is included firmly in OP16, as it will be funded through Alternative Funding (AF) arrangement.

Section 9: Group financial reporting impact

There is no material Group financial reporting impact and financial impact analysis is not required as this pre-FID IP is below the threshold of USD20mln, MOD Shell share.

Section 10: Disclosure

Material disclosures, if any, will be done in line with the Group and SPDC Disclosure policies and guidelines.

Section 11: Financing

This investment is expected to be financed with Alternative Funding (AF) arrangement. In the unlikely event that Financial Close for the AF arrangement is not achieved, the LLIs will be funded through individual JV partner cash call contributions. Shell Share of capital expenditure will be met by SPDC's own cash flow.

Section 12: Taxation

There are no unusual taxation features at this stage.

Section 13: Key Parameters

Expenditure:

The main aspect of this proposal is the approval for commitment in Q3 2016:

USD27mln, MOD, 50/50 100% JV (i.e. USD8.1mln, Shell Share) for EA FOD Step1 long lead items namely, Conductor Sharing Wellheads and associated equipment.

Section 14: Signatures

This Proposal is submitted for organizational approval.

Supported by:

....

Jan Van Bunnik

SPDC Finance Director

Date.... /.... /...

For Organizational approval:

....

Goke Akinrinmade,

GM Development Onshore/PEM, Onshore & Shallow Offshore

Date.... /.... /....

Initiator: *Esben Johnsen UPO/G/DJ*

Appendices:

Appendix-I – Economic Assumptions.

Sensitivities were carried out to assess the project value at the following conditions:

1. The project Full Life Cycle (EoFL)
2. High (P10) and Low (P90) realizations
3. High (P90) and Low (P10) CAPEX
4. 1 year production delay.

Attachments:

1. 2015 Approved Pre-FID-IP
2. Signed Resolution on JFT Commitment for LLI
3. NAOC Letter of Support

2015 EA FOD Pre-FID IP FOR BIOL(

AF-JFT LLI Resolution.pdf

Long Lead Items Approval from NAOC

Attachment 1: 2015 Pre-FID IP on Biological Monitoring

Internal Investment Proposal (Pre-FID IP-Lite)

<table>
<tr><td>Business unit</td><td>Shell Petroleum Development Company of Nigeria Limited (SPDC)</td></tr>
<tr><td>Group Equity Interest</td><td>30%, with SPDC as Operator of an incorporated Joint Venture (JV)</td></tr>
<tr><td>Shareholders / partners</td><td>Nigeria National Petroleum Corporation (NNPC: 55%), Total Exploration & Production Nigeria Limited (TEPNL: 10%), Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV</td></tr>
<tr><td>Amount (Shell Share) MOD, 50/50</td><td>Environmental Impact Assessment (EIA)/
Environmental Evaluation/
Biological Monitoring (BM) : 0.88 USD mln SS (MOD)
Project Management Team (PMT) Cost : 0.18 USD mln SS (MOD)
Total : 1.06 USD mln SS (MOD)</td></tr>
<tr><td>Project</td><td>Pre FID IP-Lite for EA Further Oil Development (FOD) Project - Step 1</td></tr>
<tr><td>Summary Economics</td><td><table>
<tr><th>Summary economics</th><th>NPV7 (USD mln)</th><th>RTEP (%)</th><th>VIR7</th></tr>
<tr><td>Base Case</td><td>-0.16</td><td>NA</td><td>NA</td></tr>
<tr><td>High OPEX(+25%)</td><td>-0.20</td><td>NA</td><td>NA</td></tr>
<tr><td>Full Project</td><td>105.3</td><td>>100%</td><td>1.04</td></tr>
</table></td></tr>
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Proposal Management Summary

The EA FOD Step I Project Scope is to drill, complete & hook-up 13 new wells and 1 work over from existing drilling platforms DP-A, DP-B and DP-J.

The purpose of this document is to request funds (USD 1.05 mln Shell Share) for Environmental Impact Assessment (EIA), Environmental Evaluation Studies (EES) & Biological Monitoring Studies (BM) plus costs for Project Management (PMT) which will carried out within the year until approval of the Investment Proposal for the Group Final Investment Decision (FID), which is scheduled for December 2015 (Deterministic).

The EA FOD Project Implementation requires that an EIA approval be secured in time for the delivery of the project. The Department of Petroleum Resources (DPR) has given directive to carry out an Environmental Evaluation and Biological Monitoring Studies for the EA & EJA Fields with the outcome forming the basis for the EA FOD EIA permit.

In addition, the EA Field is a No-Discharge Zone and DPR waiver for discharge has expired. SPDC request to renew waiver in 2011 was rejected by DPR. As it stands, both EES and BM are also mandatory activities for the asset to provide to DPR to guarantee continued production.

There is currently no existing contract within SPDC to accommodate the extensive Biological Monitoring Study scope as approved by the DPR. It is therefore exigent to close the gap by completing the entire study scope via a separate contract. In addition, the study outcomes will enhance benefits and provide mitigation measures for any adverse impacts (if any) from EA production operations and proposed project, thus, safeguarding people and the environment.

Furthermore, the progress of this project is critically based on alternative funding provision from an International Financier. The International Financier for the project requires an early provision of all relevant approvals to enable their decision on the funding and also require a Q4 2016 On-stream Date for production on the project (FOD Step 1). This requirement has led to a change in the date for the Final Investment Decision (FID) for the EA FOD from Q2 2016 to Q4 2015 thus putting significant pressure on the delivery schedule for the EA FOD EIA permit. In addition, revision by the DPR of the earlier approved studies scope with introduction of an expanded scope has put further pressure on the schedule.

Therefore, if the EA FOD is to be executed in line with revised plan, there is an urgent need for a fast track collation of documentation by April 2015 to satisfactorily meet the investor's requirement and timely support their decision process which helps facilitate funding agreement and guarantee funding provision to progress the project. Also, the project team needs to expedite mobilisation for field data gathering on BM/EIA by May 2015 to guarantee provisional EIA approval by Q4 2015 and final EIA approval by Q2 2016.

The completion of BM/EIA will facilitate the achievement of the main value drivers of the EA FOD which are:

- Achieve additional field development with reward of 50.6MMstb;
- Improve cash flow from operating asset and contribute to SPDC growth aspiration;
- Utilize the available ullage in the FPSO to maximize asset utilization;
- Reduce the unit operating cost by increasing the production in the field

The approved scope of work to be executed for the BM contract includes but not limited to:

- Measurement of the biological effect of the effluent using Laboratory bred organisms exposed to the effluent and other waste water,-acute and chronic (bioaccumulation) tests,
- Determination of the relationship between the physicochemical characteristics of the recipient medium as influenced by the effluent on the functional or structural aspects of the biological community.
- Determination of Eco toxicity, Bio-concentration and Bio-magnification of the effluent constituents within five trophic levels.

The cost basis is detailed in the value proposition paragraph.

Value Proposition and Economics Summary

The company estimate is based on prevailing market rates obtained through market survey and experiences drawn from the just concluded Bonga Field Biological Monitoring Studies

(2014) and benchmarked with contract N02003056 with cost estimate breakdown shown in table 1:

Table 1: BM/EIA Cost Breakdown

EA FOD EIA and Biological Monitoring Study VS Bonga Biological Monitoring Costs

	Item	EA Budget Estimate (F$)	Bonga Expense (F$)	Remarks
1	Environmental Baseline (EIA for EA FOD) and Biological Monitoring Data Gathering and analyses and reporting including procurement of test organisms and Habitat	1,571,694	569,984	Scope of EA bigger than Bonga and now include provision for procurement of organisms and Habitat water/ Natural Seawater (Items 6 & 11, below)
2	Hire of Work Vessel (MV Meleody) and Security vessel	668,532	1,155,142	Different vessels for Shallow and Deep Offshore, resp.
3	Remaining FMENV Desktop Approval processes (Panel Review and Accessed charges)	78,906	37,500	Bonga did not do Desktop; cost was for chopper hire.
4	Personnel Carrier & Security Vessel for Regulator's witnessing of, fishing activities and Sea Water Trucking from Bonny (@$18,000 per day for 43 days)	0	774,000	Some part of the cost captured in number 1.
5	Fuel for Work Vessel (including security)	100,184	330,009	Shallow and deep offshore locations,
6	Supply of Juvenile fish, Mollusc and Crustacean using a fishing Fishing Trawler	0	530,079	(integrated in Item 1, above)
7	Logistics Bookings, Flights and accommodation for all personnel involved (Fight/logistics for regulators x2 each (DPR, FMENV, NIMASA + SPDC CSRs) for the	240,679	191,371	This includes Cost for dedicated DPR staff for the EA EE/BM Study participation and joint review session. EA study duration is longer than for Bonga.
8	Personnel Carrier (Shadowing fishing	0	5,451	based on Approval not required for EA
9	Navigation and Positioning Contract -	19,325	87,142	Shallow and deep offshore locations,
10	Cost of Hilux from KI to Trans Amadi Daily	9,086	9,416	Supervision of lab work, etc.
11	Fuel , PC, Tug boat and security crew	0	69,272	(integrated in Item 1, above)
12	Personnel Logistics: Accommodation and Feeding for Dedicated Driver & Rep for (120	12,429	4,660	One additional rep to remain in the lab; from Bonga's experience.
14	Cost of Tug Boat from Bonny Terminal to KI	0	119,011	Lab Bred Organism to be used (integrated in Item 1, above).
15	Technical Support from Shell Global Solution including Microtox and SPME Bioassay	100,000	100,000	For EA, This cost covers Fate and Effects study/ Produced Water Discharge
	Sub-Total	2,800,835	3,983,037	
	Contingency (5%)	140,042	199,152	
	Total Estimated Cost (inc. 5% contingency)	2,940,877	4,182,189	

The associated total PMT cost Pre-FID is 0.6 mln USD. This project cost will be treated as Opex in line with the classification of all Pre-FID costs and the detailed cost breakdown leading to the Shell Share is shown in table 2:

Table 2: Cost Breakdown Grid (Shell Share)

Cost Description	USD (mln)	Shell Share (USD mln)
BM/EIA	2.94	0.87
PMT	0.60	0.18
Total	**3.54**	**1.06**

Risks and Alternatives

To deliver the BM/EIA, the project team has to manage the following significant risks and issues:

Funding
Issue & Risk: Without a satisfactory Biological Monitoring and EIA assessment, the EIA approval from DPR would not be assured and the International Financiers will not fund the project.

Mitigation: Following engagements with DPR, the Terms of Reference (ToR) for the BM/EIA has been approved and ITT has been issued with a view to conclude contracting process and award contract in April and mobilise in May for the field data gathering once the Pre IP-Lite is approved.

Local Content Requirements
Issue & Risk: The Nigerian Content Development Management Board (NCDMB) guideline requires compliance to local content utilisation, field execution and analysis to be performed in-country.

Mitigation: The project team has taken the risk of non-compliance to the NCDMB guidelines into consideration and ensured that the contracting strategy has minimised this risk. The contractors under consideration for ITT are 100% local contractor.

Incompetent Contractor/Personnel
Issue & Risk: Execution of these project activities by an incompetent contractor / contractor personnel resulting to increased HSE risk and potential ineffective emergency response.

Mitigation: To mitigate this risk the project, environmental and commercial teams have put in place a thorough ITT and assessments (capability and commercial) to ensure that the competency, capacity and standards required are fully guaranteed.

Dropped Object during Lifting Operation
Issue & Risk: Accidental dropping of object during loading and unloading of equipment into vehicle/vessel can result to injury to personnel or damage to the equipment.

Mitigation: The project team shall ensure that only trained personnel are employed in loading/unloading operations of equipment; daily tool box meetings are held; full site supervision is in place, appropriate and adequate PPEs are used; only premobbed equipment are used and overloading of vehicles/vessels/boats are avoided.

Alternatives

Alternatives considered was to use any existing contract within SPDC to close the gap, unfortunately no suitable contract currently exist in the company as this scope was just newly introduced by the DPR. The EIA/EES scope is however via an existing call of contract with the SPDC environment team.

Carbon Management

The proposal will not add appreciable amounts of flare gas hence Carbon Management effects have not been considered.

Corporate Structure and Governance

The existing corporate structure and governance arrangements of the EA FOD with SPDC as operator still subsist for this investment.

Group and Business Standards

This proposal complies with Group Business Principles, policies and standards. Functional support for this proposal is provided by Finance, Social Performance, Supply Chain Management, HSE, Operations, Legal, Treasury and Tax functions.

Project Management, Monitoring and Review

There is an identified Decision Executive, Business Opportunity Manager, Front End Development Manager and Project Manager. The existing Project Decision Review Board will control any major change proposals and will monitor value delivery based on reviews. Projects & Technology oversight will be exercised through membership of the DRB.

Budget Provision

The project is included in the OP'14 base plan, but budget amount has been revised upward with offset been sought. The requested amount is for the project to execute one-off BM/EIA (USD 2.9 million – 100%, USD 0.87 million – Shell Share), 12 months project management team expenditure (USD 0.6 million – 100%, USD 0.18 million – Shell Share). The Pre-FID IP- Lite will be funded via JV, being a FEASEX spend. The current 2015 budget provision is 0nly 40% of total budget requirement for these activities, shortfall will be addressed through budget offset. The Project post FID is planned to be funded via the Alternative Funding (AF) Arrangement.

Group Financial Reporting Impact

No material finance reporting impact.

Disclosure

Materials disclosures, if any, will be done in line with the Group and SPDC Disclosure policies and guidelines.

Financing

Shell share of the capital expenditure will be met by EA FOD own cash flow – the EA FOD is not generating cash at this stage, so SS will be paid by SPDC Ltd and Unit Partners' funding. Expenditure related to this project will be accounted for in line with Group Policy.

Taxation

There is no unusual Taxation feature.

Functional Support

N/A

Signatures

Supported by:	*Approved by:*
....	.... 25/5/15
Okunade, Mojeed O SPDC-FPT/PO	*Olagunju, Toyin AA SPDC-PTP/O/N*
FM Projects Nigeria Onshore / Shallow Water Date 21/05/15	*GM Project Nigeria - Operated* Date ...../...../.....

Attachment 2: AF LLI Resolution

MINUTES OF NNPC/NAPIMS/ SPDC/TEPNG JFT MEETING

Venue: SPDC Office, Central Business District, Abuja

Date: 23rd & 24th June, 2016

Purpose: JFT Meeting on EA FOD1 & Short Term Oil Generation (STOG) Projects

Introductions

- The meeting was opened by Alhaji Sambo of NNPC at 10.30am.
- All attendee's representing NNPC, SPDC (Operator), TEPNG, FA introduced themselves

Updates on Projects

- SPDC made a presentation on LLIs which need to be in place prior to financial close (projected as December, 2016). The LLIs total USD64mln, while there is a need for commitments of USD32mln by end of June. The items related to the end of June commitment are captured below:
  - EA FOD1 (5 EJA Wells) USD27.1mln
  - 3 Forcados Work Over Wells (Land) USD1.8mln
  - Forcados NAG Well USD3.0mln
- The above commitment of USD32mln, entails cash calls of c. USD3mln in 2016 and a balance of c. USD28mln in 2017. The JV Partners shall fund the cash calls and will be reimbursed upon Finance Close
- LLI Commitment for August to December 2016 is an additional USD32mln
- The cash call impact of this commitment is USD9mln in 2016 and USD23mln in 2017
- The commitment is to avoid delays which can affect the overall project timelines. This commitment will not be entirely cash, but a cash element will be required in September
- There are 2 rigs in the commercial tender stage which have a 7 month lead time for rig mobilization and acceptance i.e. from September.
- SPDC noted that they awaited NAPIMS JV Ops approval of commercial tenders for the wells. Expect award recommendation by September
- TEPNG requires detailed cash requirements of the items on the LLIs with hard cash outflow schedule on monthly basis for all JV partners. This must align with cost scope provided by the JV Operator
- Upon receipt of the information above, TEPNG will be in a position to concur to the resolution of committing to the LLI
- NNPC is supportive of the resolution
- SCB noted that for similar financing which the FA has done previously, commitments to LLIs before financial close is usual practice, with reimbursement done at financial close.

Updates on STOG

- SPDC made a presentation on the additional STOG
- At the recent meeting, the technical teams have agreed on the list of projects and expected incremental volumes
- Meetings are ongoing in PH to finalize the costs associated with the proposed volumes above

- The additional STOG will include a replacement program for the flow lines which have not been used since Oct 2014.
- The issues on the flow lines are associated with closed conduits, age of flow lines, sectional replacements, vandalizations etc .
- NAPIMS also noted the need for extensive scoping of the flow lines to ensure the flow line integrity
- The flow line replacement program is ensure that we do not encounter further challenges, which may affect the integrity of the projects.
- SPDC confirms that their strategy will cater for concerns raised by NAPIMS

Funding of Additional STOG

- Additional STOG – The Chairman clarified that NAPIMS's role is to carry out technical & cost review and confirmed the economics attractiveness of JV projects and that the Financing decision rests with NNPC.
- NNPC's position is to add additional STOG (2/3) to the AF Basket. TEPNG agreed with this position subject to conclusion of the on-going costs review.

Overview of Legal RFP Process

- SCB made the presentation where he highlighted the scoring methodology which were taken into consideration. These include technical and commercial experience, recent experience, track records, O&G experience
- The goal for the presentation is for each legal firm to make a presentation on their capacities, experiences, and profile
- Further discussions were on having a balance between the option of new lawyers and well tested firms. This is to ensure that we can benefit from the value of new and experienced firms without delaying the legal documentation process for the project.
- The law firms made presentations and SCB requested that Sponsors revert with two Nigerian and two international legal counsel recommendations

AF Contract Summary

- SPDC noted
    - 33 contracts in all
    - 20 contracts are outstanding
    - 11 approved
    - 9 call off contracts for wells with ongoing replacements tenders Q4 2016
    - NAPIMS support required on 3 existing contracts for surface facilities
    - 4 are on critical path contract award and project delivery
- Expect rig award recommendation in August, and rig mobilization in September
- NAPIMS noted that for approvals above USD2mln, they will need to get NNPC corporate support, which may lead to delays in approval timelines.
- SCB advises GM JV, GM Planning, Operator, JFT Chairman to engage NNPC Corporate on a special approval process for the JFT projects.
- NAPIMS also notes that they have special arrangement for managing the NCDB approvals
- SCB advises that a meeting be scheduled between the JFT top team and NCDB with a view of highlighting the JFT's objectives and seeking a fast track approval process for the JFT related projects

Definition of Incremental Oil

- SPDC made a presentation on definition of incremental oil and determination of oil sales volumes with respect to restoration activities which was adopted by the JFT

Presentations were done by the under mentioned technical consultants

- Lummus
    - Typical due diligence is 4 to 8weeks
    - Will require a temporary work permit (TWP) to carry out rig visits
    - The TAT for TWP processing is circa 2-4weeks
    - Expect to start work between July 4th and 11th

Action Points

1. SPDC (Kunle & Fata) has committed to sharing the detailed cash call requirements of the items on the LLIs with hard cash outflow schedule on monthly basis, to all JV partners (Done)
2. SPDC (Foster) to provide details of costing for all STOG projects next week.
3. JV partners to review the legal consultant evaluations/rankings from SCB, and revert after internal engagements by next JFT concall on 30 June 2016.
4. 4 legal consultants will be selected (2 International and 2 Nigerian). This will be closed out w/c 27th June, 2016.
5. SPDC to schedule a face to face meeting between JFT and NCDB on the peculiarities of the AF, and formulating a special case approach for managing JFT approval processes. Update expected next JFT concall on 30 June 2016
6. Operator to prepare a package of contracts for accelerated NAPIMS approval
7. SPDC to draft a memo for JFT endorsement on item no. 6 above
8. FA to work with the Operator on a risk decision paper for the management of the contracts (rigs), and the impact of executing contracts after financial close on the overall project. Update expected next JFT concall on 30 June 2016.
9. SCB to reach out to Lummus with an engagement contract w/c 27th June
10. SCB to plan financial modelling training for NAPIMS representatives by end of July 2016.
11. Operator to represent additional LLI requirements (USD32Mio out of USD64Mio) prior to financial close, a month before required.
12. SPDC to clarify when other Partners (TEPNG & NAOC) concurrence ~~approval~~ of the contracts will be required (in particular for the Drilling rig)

Resolutions

1. JFT gives approval of the schedule of long lead items (LLI) totalling USD29.3Mio, (comprising well head equipment and accessories costs for EA FOD: $27Mio, and Forcados NAG Well: $2.3Mio) as presented by the JV Operator. This is subject to TEPNG review and feedback on the cash call impact prior to financial close.
2. JFT gives provisional approval of the schedule of long lead items (LLI) totalling USD2.5Mio (comprising facilities cost of Forcados NAG: $0.7Mio, Forcados Workover Land: $1.8Mio) as presented by the JV Operator. The final cost is subject to the outcome of the cost review exercise going on in PH.
3. In the unlikely event that the financial close is not achieved on these projects, all committed costs shall be fully unbder written by all JV partners, in the proportion of their shareholding in SPDC JV ventures.
4. JFT supports the proposed memo for an Accelerated approval process through NAPIMS for all critical contracts.

5. JFT accepts the presentation on definition of incremental oil and determination of oil sales volumes.

ADAMU AHMED ALI

For: Nigerian National Petroleum Corporation

A. IBRAHIM

For: Shell Petroleum Dev. Co. of Nig. Limited

B. POCQUET 8/7/16

For: Total Exp & Prod. Nigeria

For: Financial Adviser

Attachment 3: LLI Approval from NAOC

nigerian agip oil company limited

Incorporated in Nigeria – RC 2974

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AC/GMUB/ABJ/2016/L91

Date: 2nd August, 2016

The Managing Director,
The Shell Petroleum Development Company of Nigeria Ltd,
Freeman House
21/22 Marina, Lagos

SPDC
RECEIVED
09 AUG 2016
TIME 11:48

ATTENTION: Mr. Steve Okwuosah

Dear Sir,

RE: REQUEST FOR APPROVAL OF COMMITMENTS FOR LONG LEAD ITEMS FOR THE PROJECTS-EA FOD STEP 1, FORCADOS NAG WELL & WORKOVER WELLS

We refer to your letter UPO/G/NG/SPDC-MPR-07-2016-0005L requesting for our approval to make commitment for LLI's for the various projects as listed above.

We have reviewed the details of the request and have seen that these projects will add value and increase production to the JV in the short to medium term.

Consequently, we therefore give our approval to the commitment for the long lead items in order not to constrain the on-stream dates of these projects.

However, looking at SPDC Quarter 2 stock disposal list and certificate just received with ref no. UPO/G/NG/SPDC-SCM-07-2016-0018L, it is noteworthy to mention that $550mln worth of stocks are unissued in your warehouse of which $163mln are well stocks. Therefore we advise that you adapt your strategy so as to ensure the maximum utilization of the stock, thereby reducing the inventory and optimizing the project cash flow.

We also wish to reiterate our commitment to support the JV and expect maximum cooperation as well whenever we need to seek for further clarification.

Thank you for your cooperation.

Yours Faithfully,
For: **NIGERIAN AGIP OIL COMPANY LTD.**

Alessandro Caschili
General Manager Upstream Business