

The Shell Petroleum Development Company of Nigeria Limited

Internal Investment Proposal

Summary Information

Directorate	Technical Directorate		
Group equity interest	100% in SPDC, whereas SPDC is the Joint Venture (JV) operator of an unincorporated JV with a 30% interest.		
Other shareholders / partners	Nigeria National Petroleum Company (NNPC: 55%), Total E & P Nigeria Ltd (TEPNG: 10%), Nigeria Agip Oil Company (NAOC: 5%) in SPDC-JV		
Amount	USD 11.14 million Shell share, MOD, 50/50 (USD 37.13 million 100% JV)		
Project	Awoba FOD (Pre FID)		
Main commitments		Shell Share \$mln	100% JV \$mln
	Long Lead Items	7.55	25.15
	Location Preparation & Land acquisition	3.32	11.06
	SCD (2.5% of total project cost)	0.28	0.92
	Total	11.14	37.13
Source and form of financing	This investment will be financed with JV funding and Shell share capital expenditure will be met by SPDC's own cash flow.		
Summary cash flow	Cost Only evaluation. Cash flow plot not applicable.		
Summary economics	Summary economics	NPV (USD mln)	RTEP (%)
	Base case	-1.6	NA
			VIR
			-0.23

Section 1: The Proposal (Management Summary)

This pre-FID Investment Proposal is required to secure funding USD 11.14 million Shell share (USD 37.13 million 100% JV) for the execution of Pre-FID activities required for the Awoba Further Oil Development (FOD) project.

The key business driver for this project is to arrest the observed production decline, through infill wells, in Awoba field. The selected Awoba FOD concept to address this, as described in the 2008 FDP, consists of drilling, completion and hook-up of 6 new oil wells to develop about 50 MMstb (expectation recovery) with an initial potential of 23.7 Mbopd.

The 6 planned wells are currently on the 2011 Short Term Drilling Sequence (STDWS) and will be drilled in a campaign with the first well to spud in Q4, 2012.

Produced oil and gas from the wells will be evacuated via the existing Awoba Flowstation. The evacuation strategy is to utilise the ullage at the facility.

Table 1: Awoba FOD Pre-FID Scope-Phased Expenditure Table (MOD 100% JV)

Description	2011	2012	Total
Long Lead Items (LLI's)	-	25.15	25.15
Land Acquisition (250m x 250m)	-	0.16	0.16
Location Preparation (6 locations)	-	10.90	10.90
SCD Expenditure	-	0.92	0.92
Total	-	37.13	37.13

Mitigation plan (in case FID does not materialize in April 2012 as planned):

- **Long Lead Items (LLI's):** LLI's will be used for any of the below basket of projects:
 - a) Nembe Creek D-sands FOD Phase 2 Project (FID planned for August 2012 {BP11}).
 - b) Awoba North West and Awoba NAG appraisal wells (to be drilled in Q4 2012).
 - c) Santa Barbara LOD Phase 2 (FID planned for March 2013 {BP11}).
- **Land Acquisition (250m x 250m):** Acquired land will be utilized whenever FID finally materializes.
- **Location Preparation (6 locations):** Planned activities and personnel will be deployed to the above mentioned basket of projects accordingly.
- **SCD Expenditure:** There is a GMoU in place in this area and this expenditure will act as a GMoU top up which will be effected just before the drilling rig moves in. Prior to rig entry to commence drilling activities, only minimal expenditure will be carried for stakeholder engagements with the various host communities.

Section 2: Value Proposition and Strategic and Financial Context

These proposed development activity aligns with SPDC's oil production growth drive and also contributes to keeping the Nembe Creek Trunk Line (NCTL) and Soku Gas Plant full. Initial potential (sum total from the six wells) is about 23.7Mbpd with a peak production rate of about 15.0Mbpd taking into account surface facility constraints.

Summary Economics

The Pre-FID of the Awoba FOD project was evaluated as cost only on a forward looking basis using 50/50 level II cost estimates. Details are shown in Table 2 below.

Further analysis was carried out to ascertain the value of the project's full scope when the project takes FID using the 50/50 level II full project cost estimates and the production forecast. The details are shown in Table 4 below.

The following sensitivities were carried out on the base case to show the impact of various scenarios on the value of the project.

- High and low CAPEX.
- Project with ring fence.
- 1.5% cost markup provision due to dispute by NNPC on Benchmark Verified and Approved (BVA) issues.
- Petroleum Industry Bill (PIB) House version 12.0; and a
- Tornado Plot.

Sensitivities were also carried out on the full project scope to show their impact on the project's value.

- High and low CAPEX.
- Project with ring fence (i.e. project without tax incentives).

Table 2: Base Case: Awoba FOD Pre-FID Economics Grid (Shell Share)

PV Reference Date: 1/7/2011	NPV (S/\$ \$ mln)		VIR	RTEP	UTC (RT \$/boe)		Payout- Time (RT)	Maximum Exposure (RT)
Cash flow forward from: 1/1/2011	0%	7%	7%	%	0%	7%	yyyy	mln
Base Case								
RV-RT (\$70/bbl RT11)*	-1.8	-1.6	-0.23	NA	NA	NA	NA	US\$ 6.79 mln (2012)
Sensitivities (on base case)								
High Capex (+ 25%)		-2.0	-0.22					US\$ 8.43 mln (2012)
Low Capex (- 15%)		-1.5	-0.25					US\$ 5.82 mln (2011)
Project with ring fencing		-10.5	-1.52					US\$ 11.77 mln (2017)
1.5% cost mark up due to BVA		-2.1	-0.29					
PIB (Version 12.0)		-4.1	-0.59					

Note: No revenue stream, hence SV-RT, RV-RT and HV-RT has same values

Table 3: Awoba FOD Pre FID Key Project Parameter Data ranges (Shell Share)

	Unit	Bus Plan BP11	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	7.5	6.4	7.5	9.4	Provided in BP11
Opex (MOD)	US\$ mln	3.6	3.1	3.6	4.5	Provided in BP11
Production volume	Mmboe	NA	NA	NA	NA	
On-stream Date	mm/yyyy	Jan-13	NA	Jan-13	NA	

Table 4: **Awoba FOD Full Project Scope (Shell Share)

PV Reference Date: 1/7/2011	NPV (\$/S \$ mln)		VIR	RTEP	UTC (RT \$/boe)		Payout- Time (RT)	Maximum Exposure (RT)
Cash flow forward from: 1/1/2011	0%	7%	7%	%	0%	7%	yyyy	mln
Base Case								
SV-RT (\$50/bbl RT11)	84.4	46.7						
RV-RT (\$70/bbl RT11)	125.7	71.0	1.72	>50%	5.4	6.6	2014	US\$ 16.69 mln (2013)
HV-RT (\$90/bbl RT11)	168.6	96.3						
Sensitivities (on FLC)								
High Capex (+ 25%)		68.9	1.33					US\$ 21.62 mln (2013)
Low Capex (- 15%)		72.0	2.05					US\$ 13.75 mln (2013)
Project with ring fencing		69.6	1.69					US\$ 21.90 mln (2013)

****Awoba FOD full Project Scope summary:**

- Drilling and hooking up of 6 new wells (generating 12 new drainage points in 5 reservoirs)
- Utilize the existing ullage at the Awoba flow station.

Table 5: Awoba FOD Full Scope Key Project Parameter Data ranges (Shell Share)

	Unit	Bus Plan BP11	Low	Mid	High	Comments
Capex (MOD)	US\$ mln	48.1	40.9	48.1	60.2	Provided in BP11
Opex (MOD)	US\$ mln	1.2	1.0	1.2	1.5	Provided in BP11
Production volume	Mmboe	17.6	NA	17.6	NA	
On-stream Date	mm/yyyy	Jan-13	NA	Jan-13	NA	

Economics Assumptions

Base Case

- Project 50/50 Pre-FID costs treated as a cost only.
- SCD Opex provided by the project team.
- NDDC levy 3% of total expenditure.

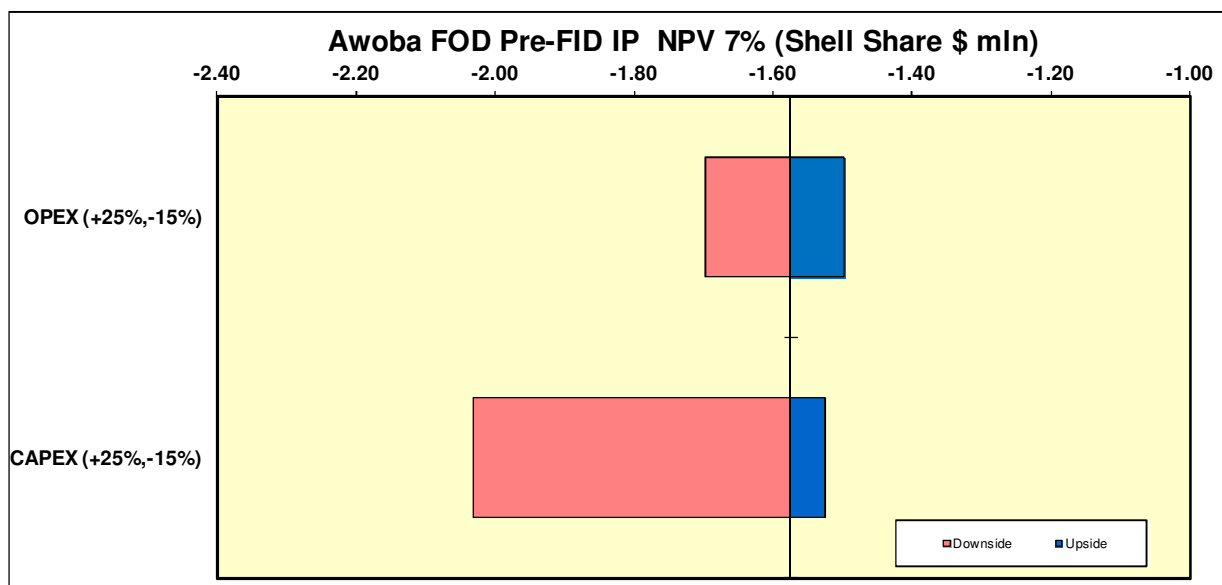
Full Project Scope

- Oil PSV of \$70/bbl RT11. And export gas price for supply to NLNG RT11.
- Gas taxed under CITA with Associated Gas Framework Agreement (AGFA) incentive.
- ARPR 31/12/2010 variable OPEX was used.
- Flare Penalty of US \$3.5/mscf non-tax deductible.
- GHV of 1150Btu/scf.
- SCD Opex provided by the project team.
- NDDC levy 3% of total expenditure.
- Education tax of 2% assessable profit.

PIB (House Version 12.0) Assumptions

- CIT is 30% of taxable income.
- Depreciation schedule for qualifying expenditure is 4 x 20% and 19%.
- NDDC levy calculated as 3% of total expenditure.
- SCD Opex provided by the project team and treated as Opex.
- Overseas Capex fraction assumed at 64%.
- 20% of overseas cost is non-deductible for determination.

Chart 1: Awoba FOD Pre-FID Tornado Plot



Note: About 67% of expenditure is Capex, hence a 25% increase depressed the NPV7% from –US\$1.6 to –US\$2.0 mln Shell Share. While a 25% increase in Opex depressed the NPV7% to –US\$1.7 mln Shell Share.

Section 3: Risks, Opportunities and Alternatives

Risks

The key risks to this investment are mainly technical and subsurface in nature. They are:

- Uncertainty around continuity of intra reservoir shales across the field might affect recovery.
- Structural uncertainty (intra-reservoir faulting and depth) in some target reservoirs.
- Increase in well costs due to operational constraints could impact project economics
- Awoba Gas Plant is shut-in due to ongoing upgrade.

Mitigation:

Robust front-end subsurface work has been carried out and this has resulted into the maturation of the entire six well proposal through the respective discipline milestones/reviews and Global Well Delivery Process (GWDP). The Gas Plant is tentatively scheduled to be re-opened in March 2012.

Opportunities

- The planned development wells offer an opportunity to acquire more data that will allow effective reservoir management decisions during the future field life.
- There is also the opportunity to use existing locations and facilities and carry out a drilling campaign with the Awoba North West & Awoba NAG appraisal wells, and possibly, Awoba North Block II exploration.
- Proved Reserves Addition (PRA) of about 5.3MMstb (2012)

Section 4: Corporate structure, and governance

The DRB overseeing this project was engaged on the 16th November 2011 and DE mandate secured to progress this investment proposal.

The Awoba FOD project is at Define Phase. It is being managed in line with the ORP and fits within the existing SPDC corporate structure and governance.

The well proposals have been matured fully through the Global Well Delivery Process (GWDP) and have been signed-off by the respective discipline authorities, and have recently been dispatched to NAPIMS for JV endorsement.

Section 5: Functional Support and Consistency with Group and Business Standards

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

Section 6: Project management, monitoring and review

Assurance Events/Gates	Date
DG1	Jul 2005
DG2	Aug 2006
DG3	Dec 2007
PAR4	Feb 2012
DG4	Mar 2012
FID	Apr 2012
Spud Date for 1 st Well	Q4 2012
OSD	Q1 2013

Section 7: Budget provision

The project is in BP11 base plan.

Section 8: Group financial reporting impact

The financial impact of this proposal on Shell Group financial is as outlined in the table below:

US\$ Million	2011	2012	2013	2014	2015	2016
Total Commitment		11.14				
Cash Flow:						
SCD Expenditure		0.28				
Pre-FID OPEX		3.31				
Capital Expenditure (LLI)		7.55				
Operating Expenditure		0.34				
Cash flow From Operations		2.47	3.27			
Cash Surplus/(Deficit)		(5.07)	3.27			
Profit and Loss:						
NIBIAT +/-		(0.31)				
Balance Sheet:						
Avg Capital Employed		2.38	3.13	1.49	1.49	1.49

Section 9: ESHIA

SCD Plan

Bille and Ke (of Degema Local Government Areas in Rivers State) are the two main communities in the project area. Interface with the communities will be through the existing GMoU that covers the area.

Issues and legacies that could become potential “show stoppers” to the project have been catalogued and most of these issues are in the process of being addressed including the Bille Community Electricity Interdependence project. Worthy of note is that none of these legacy issues have in anyway hampered our ongoing production activities from the Awoba field courtesy of the GMoU in place.

EIA

EIA plan for Awoba FOD project is covered under the Awoba NAG EIA scope which also addresses the requirements for Awoba NAG and Awoba NW Appraisal wells. The EIA report has been finalised and sent to regulators (Federal Min. of Environment & DPR) for consideration. Estimated additional cost up to final approval level is not expected to exceed N3-5m (\$20,000-30,000) which is within the uncertainty band of the cost estimate.

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 JV partners funding and 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

The following is the main aspect of this proposal:

Approval for US\$11.14mln Shell Share (US \$37.13mln MOD 100% JV) to cover Awoba FOD Pre-FID activities costs.

Section 14: Signatures

This Proposal is submitted to UIG VP Technical for approval.

Supported by:

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

Approved by:

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Bart, Lismont (UIG/T)

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Initiator:

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