The Shell Petroleum Development Company of Nigeria Limited

Internal Investment Proposal

Summary Information

<table>
<tr><td>Business unit and company</td><td>The Shell Petroleum Development Company of Nigeria Limited (SPDC)</td></tr>
<tr><td>Group equity interest</td><td>100% in SPDC. SPDC is the JV operator of an unincorporated Joint Venture with a 30% interest.</td></tr>
<tr><td>Other shareholders / partners</td><td>Nigerian National Petroleum Corporation (NNPC: 55%); TotalFinaElf (10%); and Nigeria Agip Oil Company (NAOC: 5%).</td></tr>
<tr><td>Business or Function</td><td>Exploration & Production (EP)</td></tr>
<tr><td>Amount</td><td>US$ 8.9 mln Shell share (MOD), (US$ 29.7 mln MOD 100% JV)</td></tr>
<tr><td>Project</td><td>Refurbishment and Procurement of Crude Oil Export Single Point Moorings (SPMs) at Forcados and Bonny Terminals (from 2010 to 2014).</td></tr>
<tr><td>Main commitments</td><td>
<table>
<tr><td></td><td colspan="2">(US$ mln)</td></tr>
<tr><td></td><td>Shell Share</td><td>100% JV</td></tr>
<tr><td>Installation of Refurbished SPM 12480 at Bonny</td><td>1.6</td><td>5.3</td></tr>
<tr><td>Refurbish & return to stock SPM12481 & SPM 501 to Kidney Island, Port Harcourt and Forcados Terminal respectively.</td><td>2.2</td><td>7.3</td></tr>
<tr><td>Change out of SPM17021 with SPM 12481 in year 2011 at Bonny Terminal</td><td>1.8</td><td>6.0</td></tr>
<tr><td>Change out of SPM1207 with SPM501 in year 2014 at Forcados Terminal</td><td>2.0</td><td>6.7</td></tr>
<tr><td>2% for Sustainable Community Development (SCD)</td><td>0.2</td><td>0.7</td></tr>
<tr><td>15% Contingency</td><td>1.1</td><td>3.7</td></tr>
<tr><td>Total</td><td>8.9</td><td>29.7</td></tr>
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<tr><td>Source and form of financing</td><td>This investment will be financed with JV funding and Shell's share of the expenditure will be met by SPDC's own cash flow and/or the existing shareholder facility. Formal JV partners' approval will therefore be obtained.</td></tr>
<tr><td>Summary cash flow</td><td>Cost only Project. Cash Flow chart not applicable.</td></tr>
<tr><td>Summary economics</td><td>
<table>
<tr><td>Summary economics*</td><td>NPV7% (US$ mln)</td><td>RTEP (%)</td><td>VIR7%</td></tr>
<tr><td>Base case</td><td>-1.2</td><td>NA</td><td>NA</td></tr>
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Section 1: The Proposal

Management Summary:

This investment proposal seeks management approval for US$ 8.9 mln Shell Share (US$29.7 mln 100% JV) to cover full cost of refurbishment and procurement of Crude Oil Export Single Point Moorings (SPMs) at Forcados and Bonny Terminals

Work Scope:

1. Installation of Refurbished SPM 12480 at Bonny.
2. Refurbish & return to stock SPM12481 & SPM 501 to Kidney Island, Port Harcourt and Forcados Terminal respectively.
3. Change out of SPM17021 with SPM 12481 in year 2011 at Bonny Terminal.
4. Change out of SPM1207 with SPM501 in year 2014 at Forcados Terminal.

The SPDC Bonny and Forcados crude loading terminals receive, dehydrate, store, and export all the crude oil produced by SPDC and other 3rd party injectors (AGIP, Elf, and Chevron). Export quality crude is sent through the export pipelines to Single Point Mooring (SPM) buoys from which tankers berth and load the crude oil.

Value at Risk:

The SPMs generally are in a poor state of integrity and expose SPDC to the risk of loss of containment and the potential inability to export crude oil.

The value at risk is based on which of the Terminals buoy is not executed. If both are not executed then SPDC is exposed to the value and the business breach stated below in the event of a failure.

Either, the entire Eastern and/or Western productions may not be exported.

The minimum response time should any of the divisions experience failure is 30days if vessel is in country. Installation vessels are proprietary items and booked in advance because of the specialist nature of activity.

The company under took aggressive approach to correct the anomalies. The company procured and installed one new SPM in Forcados Terminal in 2007 and refurbished two other SPM (SPM 12480 & SPM 1207). Following completion of refurbishment, SPM 1207 was installed in Forcados Terminal to change out SPM 501. This second installation restored Forcados Terminal Export Integrity for SPM Buoys. The second refurbished for Bonny Terminal SPM 12840 is currently in wet storage at Forcados barge slot awaiting installation at Bonny to replace SPM 12841

The new SPM installed in Forcados in 2007 is in good condition, but will require to be changed out in 2014 according to the statutory requirement. So the unfit SPM 501 requires refurbishment to make it available for the change out program.
The existing SPM 17201 installed 2004 in Bonny will require change out in 2011. So the unfit SPM 12481 that will be removed during installation of 12480 will require making it available for the change out program.

This proposal seeks approval for the installation of the refurbished buoy SPM 12480 at Bonny to replace SPM 12481 that is overdue for change out, thereby reinstating the integrity of SPM Buoys at the Bonny Crude oil export Terminal. In addition, this proposal also includes request to refurbish the 2 SPM Buoys, one each from Bonny (SPM 12481) and Forcados (SPM 501) and keep them as provision for spares.

The total cost estimate of US$8.9 mln (Shell Share) is based on recently completed contract prices in (Q2 2009) for similar project from Original Equipment Manufacturers (SBM and Blue Water) for both the refurbishment and installation works. In addition, there is a 15% allowance made for contingencies and 2.0% allowance for Sustainable Community Development (SCD, mandated by SPDC).

The detailed and phased expenditure of project on a yearly basis for the next 5 years is shown in Table 1 below:

Table 1: Project Cost Phasing (US$mln MOD, Shell Share)

	2010	2011	2012	2013	2014	Total
Project Cost US$ mln (Shell Share)	3.2	3.2	0.1	0.1	2.3	8.9
Total	**3.2**	**3.2**	**0.1**	**0.1**	**2.3**	**8.9**

Section 2: Value Proposition and Strategic/Financial Context

The benefits of this project are:

- **Restore** 100% availability and reliability of the terminal crude oil export systems.
- **Restore** the Technical integrity of SPDC buoys in line with group minimum standards.
- **Reduce** to 'as low as reasonably practicable' (ALARP) the risk of SPM buoy failure due to poor integrity with consequent loss of export capability.
- **Ensure** SPDC compliance with Department of Petroleum Resources (DPR) Statutory Regulations.
- **Avoid** the HSE risk inherent in continued use of faulty and unserviceable SPMs.
- **Reduce** to ALARP the risk of export system failure, thus ensuring uninterrupted export operations at both Terminals.
- **Prevent** environmental pollution and consequent cost of clean-up/remediation.
- **Safeguard** SPDC/Group reputation/image.
- **Demonstrate** commitment to maintenance of asset integrity.

Inadequate maintenance has occurred because of poor diving contractor service availability, contracting issues, and budget constraints.

Summary economics

The economics of refurbishment of four SPMs and the procurement of a new one was evaluated as a cost only Oil infrastructure project using 50/50 cost estimate. The project returns an NPV7% of US$ -1.2 mln. Sensitivities were carried out to show the impact of high Opex, PIB, and 1.5 % Project cost mark up due to BVA (benched marked verified approved) issues. Further sensitivity was also carried out treating the expenditure as Capex. See table 2 below for further details.

Table 2:

Summary Economics Grid

PV Reference Date: 1/7/2010	NPV (S/S $ mln)		VIR	RTEP	UTC (RT $/bbl or $/mln btu)		Payout-Time (RT)	Maximum Exposure$mln (RT)
Cash flow forward from: 1/1/2010	0%	7%	7%	%	0%	7%		
SV ($50/bbl RT10)	-1.3	**-1.2**	**NA**	NA	NA	NA	NA	$1.3 mln (2014)
RV ($60/bbl RT10)	-1.3	**-1.2**	**NA**	NA	NA	NA	NA	$1.3 mln (2014)
HV($80/bbl RT10)	-1.3	**-1.2**	**NA**	NA	NA	NA	NA	$1.3 mln (2014)
Sensitivity								
High Opex (+20%)		**-1.5**	**NA**					$1.6 mln (2014)
PIB		**-2.5**	**NA**					$2.8 mln (2014)
Project cost mark up (+ 1.5%)		**-1.6**	**NA**					NA
Expenditure treated as Capex		**-2.0**	**-0.25**					$4.4 mln (2011)

Key Projects Parameter Data Ranges (Shell Share)

	Unit	Bus Plan (BP09)	Low	Mid	High	Comments
Capex (MOD)	US$ mln	3.2		0.0	0.0	
Opex (MOD)	US$ mln	0.1	NA	8.9	10.7	Budget provision made for 2010 facilities work. While 2011-2014 expenditure to be provided for in Business plan for 2011-2014.
Production volume	Mmbbl	NA	NA	NA	NA	
Commissiom Date	mm/yyyy	NA	NA	NA	NA	
Production in first 12 months	Mmboe	NA	NA	NA	NA	

Economic Assumptions:

- SCD cost treated as Oil Independent OPEX.
- NDDC Levy of 3% of Total Expenditure.
- 1.5% of total expenditure (100%) due to BVA (Benched Marked Verified Approved) issues.

Section 3: Risks, opportunities and alternatives

S/N	Risk Description	Mitigation / Remedial effort
1.	**Technical/ Operational:** Project not being completed to acceptable standard and within time specified.	Original Equipment Manufacturers (OEM) will carry out the refurbishment using their established procedures and standards; therefore no technical execution risk is envisaged. However, continuous project progress review will be held at intervals to monitor the project delivery schedule. . In carrying out this project relevant functional inputs will be used to ensure seamless execution of this project.
2	**Budget/NAPIMS Approvals** Inadequate/delay in providing budget for 2010-14 activities could prevent work implementations	Ensure continuous NAPIMS & partners' engagements to secure their support/buy-in for their own counterpart funding. This is because delays in securing joint venture partners' approval could delay the project and considering the importance of the TERMINALS to the oil & gas operations in SPDC, the facilities technical integrity should be assured by the refurbishment.
3	**Security/Commun**	An approved security plan for this project will be put in place in

	ity Concerns: Clashes and general insecurity as applicable in the Niger-Delta area. (Political/Security)	full compliance to the corporate security plans for operating in the field. The contractors involved will have own security arrangement approved by SPDC security officer. There will continuous Community engagements via SPDC Community Relations Officers and contractor community liaison officers SPM refurbishment work will be done offshore or at contractor's yard in Lagos and will therefore not be as vulnerable as projects done onshore. An Integrated Production Security Surveillance (IPSS) is in place with adequate security framework. Furthermore, the installation contractor will also develop own security arrangement for approval by SPDC security officer.
4.	**HSE:** Harm to people and equipment. Pollution to the environment	A project-specific HSE plan incorporating all the potential hazards relating to these projects and mitigation measures will be developed and implemented all through the projects. Worksite hazard management and contractor management would be detailed out. Life saving rules will be deployed where applicable to both SPDC and contractor staffs.
6	Safety	To mitigate the risk of safety to plant, equipment and personnel working in a live hydrocarbon facility with concurrent operations. The Permit-to-work system shall be strictly adhered to and a concurrent operations plan shall be developed as part of the project HSE management plan.

Alternatives Considered

Alternative refurbishment/replacement options were considered, in terms of cost and do-ability. One common feature in all the alternatives is the refurbishment of all two maintainable SPMs and the de-commissioning of the unserviceable SPM both Terminals.

The 'do nothing' option is not considered because of SPDC's vulnerability to export capability, as there is NO ALTERNATIVE to this facility or means of exporting SPDC Eastern and Western productions.

Section 4: Corporate Structure, and Governance

This project fits within the existing SPDC corporate structure and governance.

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

Increasing and sustaining export production have always been the aspiration of the SPDC management team; to this end adequate support is given to the Terminal Engineering team to execute these projects. Functional supports have been obtained from Engineering, Corporate Affairs, (with respect to Sustainable Community Development, HSE, and Security) and Technical Planning teams. Other relevant functional inputs will be obtained to ensure seamless execution of this project.

Section 6: Project Management, Monitoring and Review

The Terminal Engineering team will execute the project. In carrying out the project, relevant functional inputs will be applied to ensure seamless execution. SPDC HSE and SCD policies and 12 life saving rules will be strictly adhered to with a view to minimize the risk of accident/incident and disruptions. In addition, a project-specific HSE plan incorporating all the potential hazards relating

to these projects will be put in place. Community will be proactively engaged and MOUs signed (where none exist) before commencement of work activities.

The Terminals Engineering team will execute this project. A project Engineer and a company site representative will be dedicated to monitoring progress on daily and weekly basis

This project will be reviewed with the 2010 – 2014 Asset Reference Plan (ARP) for the Terminals. The performance of the SPMs will be monitored monthly via SAP generated integrity report for critical equipment.

Section 7: Budget Provision

The approved budget for 2010 made provision of FUS$3.3mln Shell share for the SPM in terminal facilities work. While the remaining balance of US$5.6 mln Shell Share for 2011 to 2014 requirements will be provided for in the 2011 – 2012 business plan preparation.

Section 8: Group Financial Reporting Impact

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

US$ mln	2010	2011	2012	2013	2014	Post 2014
Total Commitment	3.2	3.2	0.1	0.1	2.3	0.0
Cash Flow						
Commitment Opex	3.2	3.2	0.1	0.1	2.3	0.0
Capital Expenditure	0.0	0.0	0.0	0.0	0.0	0.0
Operating Expenditure	3.2	3.2	0.1	0.1	2.3	0.0
Cash Flow from Operations	-0.91	-0.47	0.42	-0.01	-0.64	0.32
Cash Surplus/(Deficit)	-0.91	-0.47	0.42	-0.01	-0.64	0.32
Profit and Loss						
NIBIAT +/-	-0.47	-0.47	-0.01	-0.01	-0.34	0.00
Balance Sheet						
Average Capital Employed	0.2	0.4	0.2	0.0	0.2	0.2

Section 9: Disclosure

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

Section 10: Financing

The project will be funded from SPDC's own generation of funds and existing shareholder facility.

Section 11: Taxation

The capital expenditure is tax deductible at the statutory rate of 85% under the Petroleum Profit Tax Act 2004. Fiscal depreciation is given over 5 year's straight line with 1% retention in the fifth year. In addition, a one off investment allowance of 5% is claimable on the capital expenditure.

Section 12: Key Parameters

This investment proposal seeks approval for $8.9 mln Shell share, MOD, 50/50 ($29.7 mln 100% JV) for refurbishment and Procurement of Crude Oil Export Single Point Moorings (SPMs) at Forcados and Bonny Terminals.

Section 13: Signatures

This Proposal is submitted to SPDC General Manager, Onshore/ Shallow Offshore for approval.

Supported by:	Approved by:
.....	.....
Rob Van Velden SPDC-FUI/FB	*Birch Andrew UI/T/P*
Date ..../..../....	Date ..../..../....

Initiator: _____

Emman.I. Dibua

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